Wabigoon Forest Independent Forest Audit 2000-2005

Prepared by:

kbm FORESTRY CONSULTANTS INC.

Thunder Bay, Ontario

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1.0 Executive Summary

The report presents to the public and the auditees the findings of the Independent Forest Audit carried out on the activities implemented during the period April 1, 2000 to March 31, 2005 on the Wabigoon Forest. The Forest was managed by Weyerhaeuser Company Limited during this time. The audit was conducted by KBM Forestry Consultants Inc. using the Ontario Ministry of Natural Resources 2005 Independent Forest Audit Process and Protocol.

The purpose of the Independent Forest Audit is to:

- Assess the extent of forest management planning compliance with the Forest Management Planning Manual and the Crown Forest Sustainability Act (1994)
- Assess the extent of forest management activities compliance with the Act and with the forest management plans, the manuals approved under the Act and the applicable guides
- Compare planned versus actual forest management activities
- Assess the effectiveness of forest management activities in achieving audit criteria and forest management objectives
- Assess the licensee's compliance with the terms and conditions of the Sustainable Forest Licence
- Assess the effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit

The report deals with the eight Guiding Principles of the Audit Protocol in sequence and they are:

- Commitment
- Public Participation
- Forest Management Planning
- Plan Implementation
- System Support
- Monitoring
- Achievement of Management Objectives and Forest Sustainability
- Contractual Obligations

The audit team's major finding is that the Wabigoon Forest was managed sustainably during the audit period and, subject to the exceptions noted in this report, conformed to the requirements of the Crown Forest Sustainability Act. As a result, the audit team has made the recommendation that the Minister of Natural Resources extend the term of Weyerhaeuser's Sustainable Forest Licence for a further five years from 2022 to 2027.

The audit team has made 22 recommendations which must be addressed through actions, 21 suggestions for improvements and identified 3 best practices which were exemplary activities. Acting on the recommendations is crucial as there are some important improvements to be made in the planning and monitoring of operations by both Weyerhaeuser and the Ministry of Natural Resources.

The audit team was impressed with the overall operational results of Weyerhaeuser's forest regeneration program. Across the Wabigoon Forest harvested areas are being promptly and successfully treated, habitat for fish and wildlife is being maintained and the newly growing forest is healthy. Our on-the-ground and aerial observations led us to conclude that the rising new forest will resemble the existing older forest. We are of the opinion that this indicates the forest is being sustainably managed and that the public interest is being served.

John R. Cary, RPF – Lead Auditor on behalf of the Audit Team

2.0 Introduction

This audit report presents the results of the Independent Forest Audit (IFA) for the Wabigoon Forest (the Forest). The audit was conducted by KBM Forestry Consultants Inc. (KBM) for the period from April 1, 2000 to March 31, 2005. The Forest is managed under a Sustainable Forest Licence (SFL) held by Weyerhaeuser Company Limited (Licence No. 541953).

The Forest is located in the Ministry of Natural Resource's (MNR) Northwest Region and is administered from the MNR Dryden District office. During the 1998-2003 Forest Management Plan (FMP) term, some areas located near Ignace were administered by the Ignace District Office. Avenor Inc. held the SFL during the preparation of the 1998-2003 FMP, while Weyerhaeuser held the SFL during the preparation of the 2003-2008 FMP.

2.1 Audit Process

2.1.1 Purpose

The Independent Forest Audit Process and Protocol[1] (IFAPP) was developed by MNR to provide a comprehensive and consistent method of evaluating forest management activities on Crown land. The IFAPP states that the purpose of an IFA is to:

- Assess the extent of forest management planning compliance with the Forest Management Planning Manual (FMPM[2]) and the Crown Forest Sustainability Act (CFSA) (1994);
- Assess the extent of forest management activities compliance with the CFSA and with the FMPs, the manuals approved under the CFSA and the applicable guides;
- Compare planned versus actual forest management activities;
- Assess the effectiveness of forest management activities in achieving audit criteria and forest management objectives;
- Assess the licensee's compliance with the terms and conditions of the SFL; and,
- Assess the effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit.

2.1.2 Audit Process Overview

The IFAPP contains 336 audit procedures that are potentially applicable to the Forest. Most of these procedures pertain to plans prepared under the requirements of the FMPM. The audit procedures serve as a framework to provide a structured approach to evaluating whether forest management activities meet the requirements governing forestry practices on Crown land in Ontario. Since the IFAPP contains procedures that pertain to both the Licensee and MNR, both parties are auditees.

The previous IFA conducted on the Forest was undertaken in 2000. The implementation of the recommendations contained in the previous audit was examined during the course of this audit.

The audit process for the Forest consisted of six components:

A) Audit Plan[3]: KBM prepared an audit plan that described the schedule of audit activities, audit team members and participants, and auditing methods. The audit plan was submitted to MNR, Weyerhaeuser, the Forestry Futures Committee (FFC), and the Chair of the Dryden Local Citizens Advisory Committee (LCAC).

B) Public Survey: KBM prepared a one-page public survey that was distributed to all organizations and to a random sample of one-third of the names on the Dryden District mailing list provided by MNR. In addition, the public notice was posted and available for download from KBM's web site (www.kbm.on.ca). The purpose of the survey was to solicit public input and to provide respondents with an opportunity to identify and discuss any site-specific concerns on the Forest. A copy of the survey can be found in Appendix F. Notices were placed in four local newspapers (Dryden Observer, Ignace Driftwood, Sioux Lookout Bulletin and the Wawatay News) soliciting public input on forest management activities on the Forest

[1] OMNR 2005. Independent Forest Audit Process and Protocol. 27 pp. + Appendices.

[2] OMNR 1996. Forest Management Planning Manual for Ontario's Crown Forests. Toronto. Queen's Printer for Ontario. 452 pp.; and OMNR 2004. Forest Management Planning Manual for Ontario's Crown Forests. Toronto. Queen's Printer for Ontario. 440 pp.

[3] KBM Forestry Consultants Inc 2005. Wabigoon Forest Independent Forest Audit Audit Plan. 16 pp. + Appendices.

for the period under audit. A copy of the public notification can be found in Appendix F. As directed by MNR during the course of the audit, KBM also conducted telephone interviews with greater than 10% of the tourism outfitters with interest in the Forest.

In total, there were 33 responses to the survey process. One arrived very late in December. A summary is presented in Appendix E.

During the pre-audit visit on the evening of August 10, 2005, members of the audit team met with the Dryden LCAC. The purpose of the meeting was to introduce the audit plan to the LCAC and determine how its members wished to be consulted. This meeting, and further correspondence, resulted in a number of comments being provided to the audit team regarding forest management (see Appendix E). One LCAC member participated in various portions of the field site visit and another was present at the closing meeting.

C) Field Site Selection: Pre-audit meetings were held in Dryden from August 10 to 12, 2005. The audit team used this time as well as the remainder of the pre-audit term to conduct the preliminary site selection process. Annual Work Schedules (AWSs), Annual Reports (ARs) and other data sources provided by MNR and Weyerhaeuser were used to ascertain the amount and types of forest operations carried out on the Forest during the course of the audit term. A stratified random sample of sites was then selected to ensure that selected sites were representative of the activities conducted on the Forest during the audit term. Figure 1 presents the locations of the field sites that were audited.

The audit team began by selecting five harvest blocks for each year of depletion during the audit period plus five earlier depletions to capture silviculture projects. The blocks targeted 10% of the area for each treatment type. New road segments were also selected for inspection.

The sample included projects deemed eligible by the KPMG review of specified procedures. "The purpose of (KPMG) conducting these procedures (was) to confirm that SFL licence holders (had) appropriate supporting documentation for payments received from the (Forest Renewal and Forestry Futures) Trusts", for the fiscal year beginning April 1, 2003, and ending March 31, 2004[4]. The goal of the audit team was to confirm that the project areas associated with the payments were treated as described. These treatments included site preparation, aerial seeding, tree planting, tending, and Free-to-Grow (FTG) surveys.

Clusters of FTG survey areas were selected along the helicopter flight line between sample harvest depletion blocks. Thirty-five blocks in total were selected and checked to ensure forest unit (FU), ecosite and operational representation.

There were problems in accessing the records. One of the problems was related to how Weyerhaeuser filed earlier silviculture records on a project basis that encompassed several blocks. The current practice is to file records by block number. These problems were sufficiently rectified by the time of the site visit, but encumbered site selection. The final selection of sites covered the full range of operating areas within the Forest.

[4] March 17, 2005 letter from Richard B. Greenwood, RPF, Director of MNR Forest Management Branch, to Dan Dedo, Weyerhaeuser Ontario Forestlands Manager.

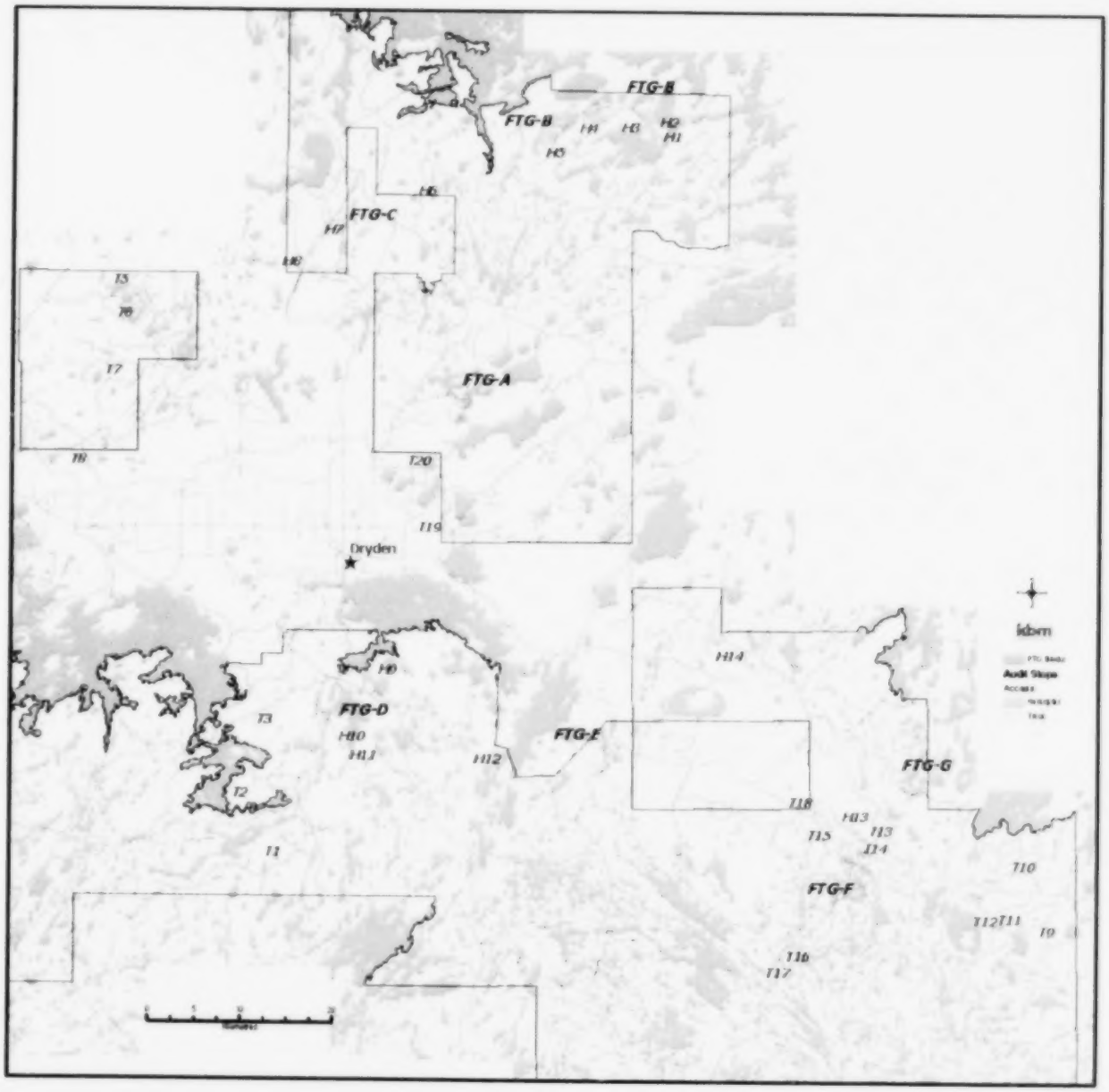


Figure 1. Audit field site locations.

KBM committed to a sampling range of between 10 and 25 percent of key field activities and operations conducted on the Forest, depending upon the type of activity. Table 1 presents the sampling intensity of the field visits completed on the Forest. The objectives of the field site visits were to confirm that implementation activities were conducted according to plan, they conformed to provincial laws, regulations, and guidelines, and were effective.

D) Pre-audit Document Review: Prior to the site visit, the audit team reviewed documents provided by Weyerhaeuser and MNR including: the Wabigoon Forest 1998-2003 and 2003-2008 FMPs, the 1998-2003 Report of Past Forest Operations (RPFO), 2000/01-2004/05 AWSs, the 2000/01-2003/04 ARs, and the Comparison and Trend Analysis of Planned versus Actual Forest Operations (Trend Analysis Report) prepared by Weyerhaeuser as a requirement of the IFA.

E) On-Site Audit: The audit team conducted interviews and field visits from September 26, 2005 to October 4, 2005, including discussions with members of the Dryden LCAC, First Nations representatives, other key stakeholders, members of the public, and important staff from Weyerhaeuser and MNR. The audit team examined documents, records, and maps at the Weyerhaeuser and MNR offices and examined 32 sites over three days where forestry practices had occurred during the audit period. The number of blocks is typical of the sampling intensity seen in past audits, but the average block size on this forest is smaller.

The audit team visited the selected sites from September 27-29, 2005. Two-thirds of the selected sites were accessed by helicopter with all FTG blocks being assessed from the air. The helicopter provided rapid access and an aerial view to verify operational compliance with plans and reports (see Figure 2).

Several observers from MNR region, Head Office, and the FFC accompanied the auditee and audit team to blocks accessed by road. This arrangement allowed for informal interviews and discussions about findings in the course of the field audit.

A closing audit meeting was held in Dryden on Tuesday, October 4, 2005. This meeting provided a forum for the audit team to present and discuss preliminary audit results with Weyerhaeuser, MNR, and a representative of the Dryden LCAC.

Table 1. Audit sampling intensity for the Forest.

Activity	Total Area/Number (2000-2005)	Area/Number Sampled	Percent Sampled
Harvest	28,319ha	2,881ha	10
Renewal and Maintenance	50,987ha	5,710ha	11
Free-to-Grow	15,145ha	2,326ha	15
Area of Concern (AOC) Categories*	16	12	80
Water Crossings**	86	12	14
Year 2003/04 Forest Renewal Trust Activities	9,019ha	1,856ha	21

* AOC categories refer to the different types of AOCs present on the Forest. Examples would include riparian areas, reserves, cool water fisheries, moose aquatic feeding areas and osprey nests. Numerous AOCs were associated with most sites selected for review of harvest and renewal operations. In addition, some sites were specifically selected to represent a cross section of AOCs.

** Sixty-nine water crossing installations were recorded by the auditee. However, water crossing installations were not recorded for a period of approximately six months during the five-year audit period. For this table, the total number of installations for the audit period was extrapolated for the full five-year period.

Figure 2. Sites were visited by truck and helicopter to ensure optimal efficiency, access to winter harvest blocks, and opportunity for discussion with auditees and observers.

F) Final Report: In the final document produced by the audit team, the audit results are presented in conjunction with a brief description of the audit process and the forest licence area under review. An important distinction is made between recommendations and suggestions within the report. Recommendations draw attention to deficiencies in forest management that require corrective action. In most cases, recommendations are a result of non-conformance to a law or policy, or specify a lack of effectiveness in forest management activities. Recommendations must be addressed in an Action Plan developed by the licensee and MNR as per Appendix E of the IFAPP. Suggestions are less serious in nature and provide advice for improving particular aspects of forest management. Auditees are not required to address suggestions in the Action Plan. A notice of best practice highlights an exceptional management practice or high level of performance noted on the Forest.

2.1.3 The Audit Team

The audit was carried out by an independent audit team assembled by KBM Forestry Consultants Inc. under contract with MNR. The audit team consisted of seven members:

- John Cary, RPF, Lead Auditor
- Nick Baggs, RPF, Planning Auditor
- Peter Street, RPF, Harvesting Operations Auditor
- Laird Van Damme, RPF, Silviculture Auditor
- Peter Higgelke, RPF, Wildlife/Ecology Auditor
- Colin Arlidge, RPF, Forest Modelling Auditor
- Ben Newman, RPF, Audit Secretariat

Audit team members and their responsibilities are described in Appendix B.

2.1.4 Guiding Principles

The IFAPP identifies the components of the audit process. There are eight guiding principles within the audit protocol (Appendix C). Each principle contains a series of criteria that guide the audit team in its assessment of achievement toward a given principle. Under each criterion, a number of procedures detail the assessment of auditee compliance and effectiveness. KBM assigns each of the applicable procedures to an auditor who, in turn, examines the evidence for conformity to the procedure.

2.2 Forest Management Context

2.2.1 Location of the Wabigoon Forest

The Forest is located in MNR's Northwest Region and is administered from the MNR Dryden District office. The Forest extends from the southern shores of Lac Seul south to Dibble and Nora Lake and from Silvery Lake in the west to Osaquan Lake in the east (FMP 2003, see Figure 3).

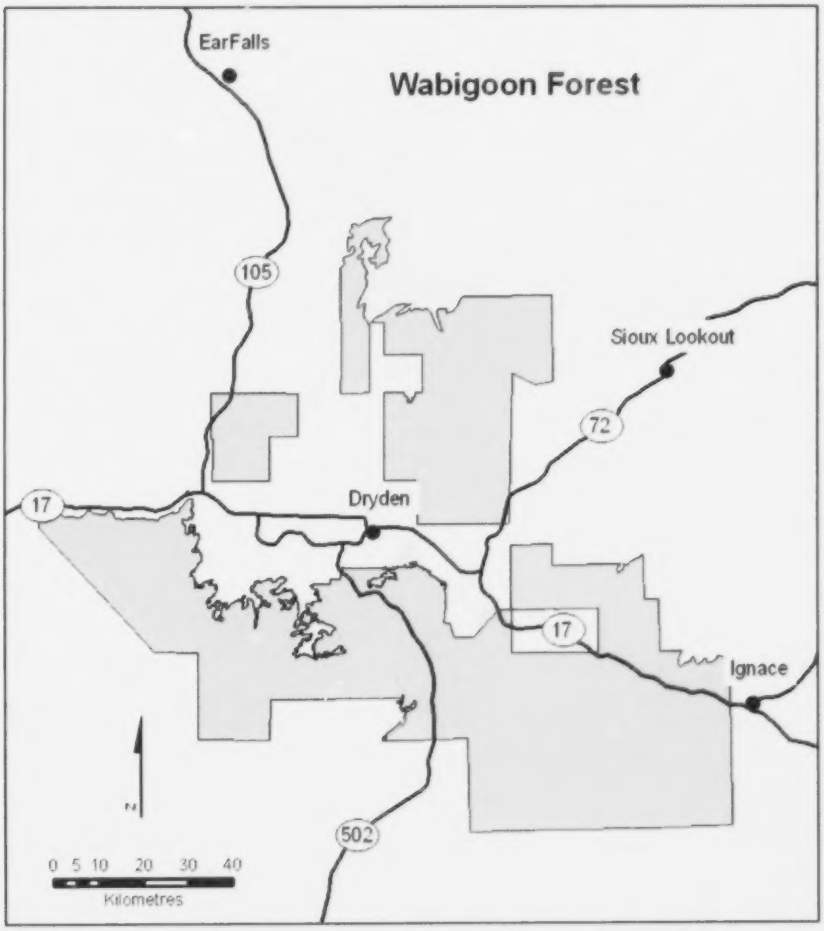


Figure 3. Location of the Forest.

2.2.2 Wabigoon Forest Overview

The 1998-2003 FMP for the Forest encompassed a total of 728,551ha. The 2003-2008 FMP was written utilizing a new Forest Resource Inventory (FRI) that was based on 1999 aerial photography and updated to 2003. From this new FRI the Forest encompasses a total of 732,718ha. "This increase is primarily attributed to the re-inventory of the Forest utilizing revised ownership information from MNR and reassessment of management unit boundaries with adjacent management units" (from FMP 2003).

The FMP further states that the topography of the Forest includes large moraines, outwash and deltaic sand and gravel plains, precambrian ridges and scoured bedrock. Glacial and post glacial deposits thinly overlay the bedrock. A portion of the Forest was once covered by Lake Agassiz, which has resulted in the deposition of sediments consisting of sandy-silt, sand and gravel deposits. These deposits are overlain by silt, varved clays and lacustrine sand. Other recent deposits include alluvial, beach, eolian and organic materials. Two main soil types are sands and clays. The depth of these soils vary across the Forest.

The climate of the area can be characterized by long cold winters and short cool summers (FMP 2003). The Forest experiences an average annual precipitation of 685mm, of which most falls as rain.

The large majority of the Forest is Crown managed production forest (see Figure 4). A relatively small portion of the Forest is non-productive.

The Forest is situated primarily within the Boreal Forest Region with a small southerly portion lying within the transition zone between the Boreal and Great Lakes-St. Lawrence Forest Regions. Figure 5 illustrates the working group composition of the Forest for both the 1998-2003 and 2003-2008 FMPs. Jack pine is the dominant species on the Forest followed by black spruce and poplar. The significant reduction in the balsam fir FU is explained in section 3.3.7. The age-class distribution for the Crown managed production forest for the 1998-2003 and 2003-2008 FMPs is found in Figure 6.

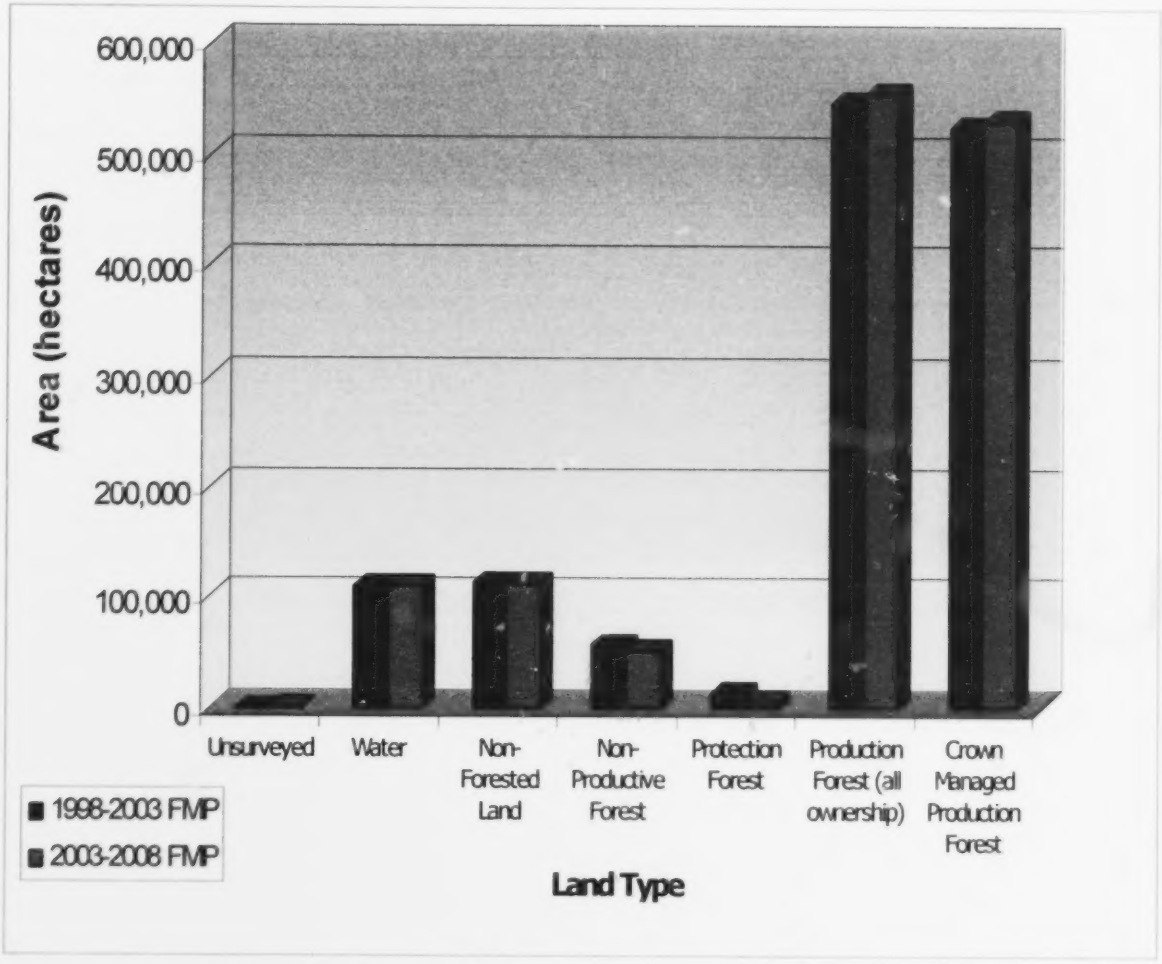


Figure 4. Summary of the Forest by Land Type (Source: Wabigoon 1998-2003 FMP-1 and 2003-2008 FMP-1).

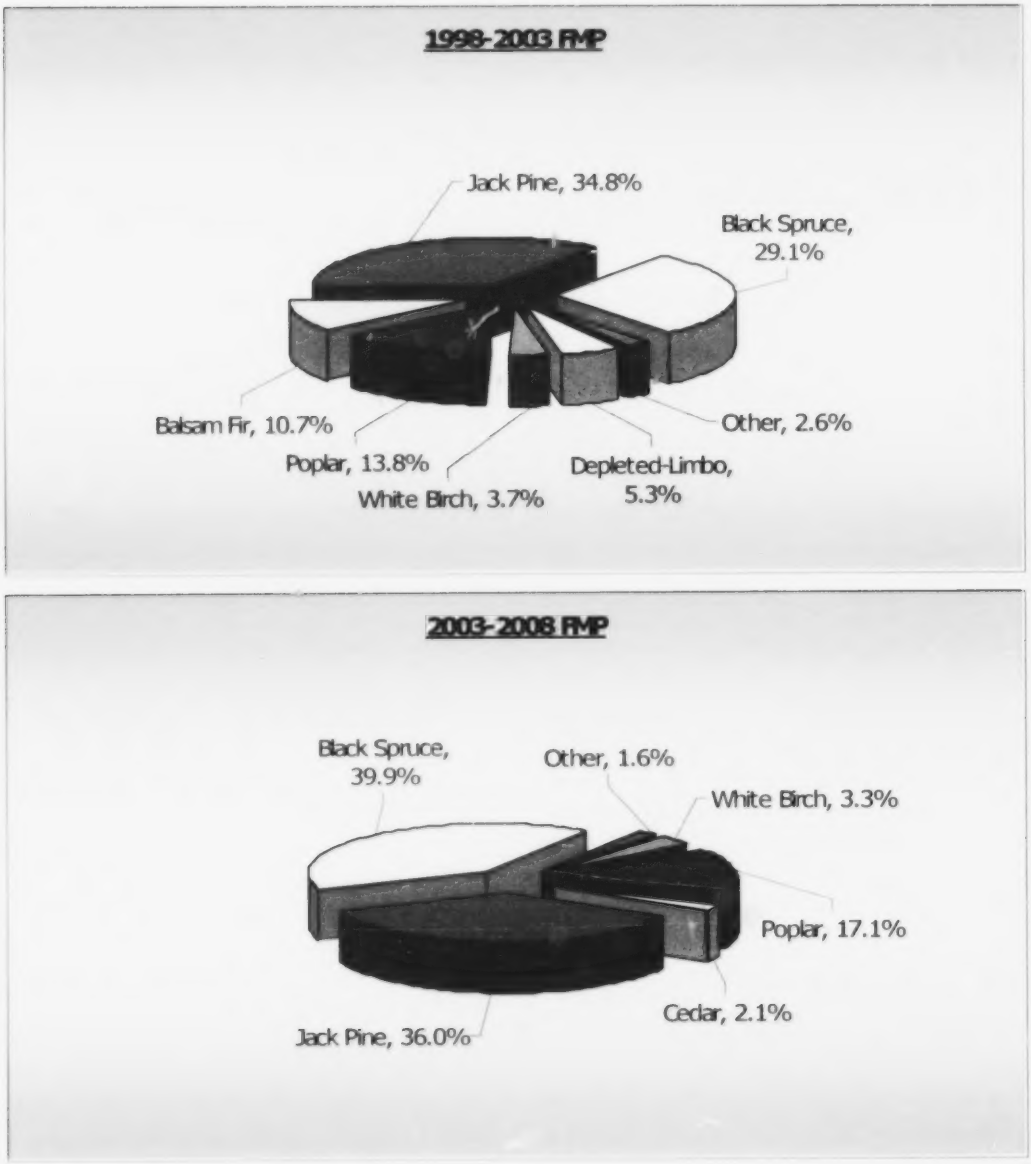


Figure 5. Summary of Crown Managed Production Forest by Working Group (Source Wabigoon 1998-2003 FMP-2a and 2003-2008 FMP-2).

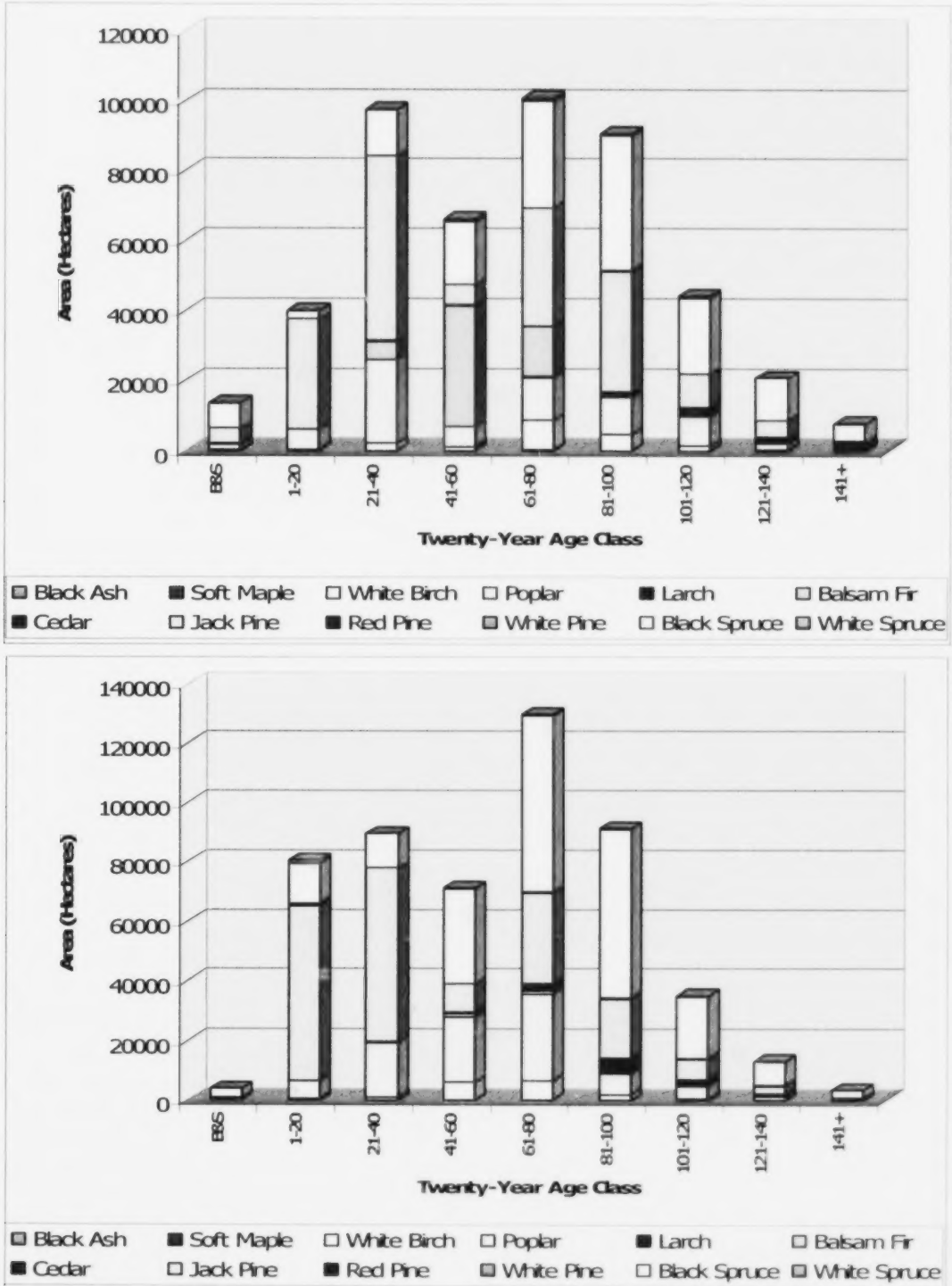


Figure 6. Age-Class Distribution of Crown Managed Production Forest for the 1998-2003 (top) and 2003-2008 (bottom) FMPs by working group.

2.2.3 Issues Impacting Forest Management

The IFAPP requires a review of High Priority Aspects (HPAs) of the auditees' systems or activities before the site visits take place. HPAs can include significant management challenges that are inherent to any forest (e.g., presence of woodland caribou or extensive areas of sensitive soils), or can be specific issues that have arisen during forest management planning or plan implementation (e.g., conflicts with other forest users over proposed forest management activities).

The audit team assembled a list of potential HPAs from a review of the FMPs, the previous IFA of the Forest, and discussions held with representatives of both Weyerhaeuser and MNR. Based on these discussions the following HPAs were identified for the audit: snag retention; rutting of sites; fibre utilization; frequency of compliance inspections; balsam fir occurrence and utilization; compliance with silviculture ground rules (SGRs); First Nations involvement in forest management; and, balanced harvest and renewal.

The audit team examined these aspects during the course of the audit and they are all referred to in the body of this report in varying detail. Snag or wildlife tree retention is commented on in Section 3.4.2 on Harvest as are both rutting and fibre utilization. First Nations involvement is discussed in detail in both the Local Citizens Committee Section 3.2.1 and in Section 3.2.3 on Native Peoples Consultation. Compliance with SGRs was examined and then commented on in Section 3.4.3 on Renewal. The balance between harvest and renewal as well as balsam fir occurrence are covered in the Comparison and Trend Analysis Report and by comments of the audit team in Section 3.7.3. Compliance inspections are discussed in detail in Section 3.6.1 General Monitoring.

3.0 Summary of Audit Findings

3.1 Commitment

Weyerhaeuser and MNR prepared separate policy statements that address the organizational commitment to sustainable forest management. Each organization's policy was distributed internally to ensure that all relevant parties were aware of the commitment. The audit team considered these policies as they worked with staff during the audit and asked specific questions to assess their awareness.

Weyerhaeuser developed extensive and appropriate policy statements as part of the following:

- Environmental Management System (EMS, ISO 14001)
- Sustainable Forest Management (CSA Z809)
- A Policy and Framework for Building Relationships (Canada's Aboriginal Peoples and Weyerhaeuser)
- Safety Vision and Policy

The mission statements and EMS booklets are carried by staff in the field and widely distributed throughout the Weyerhaeuser office and on internal and external websites. The booklet has been updated as required and is now in its 4th edition. The policies and mission statements are reflected in the daily operations of employees on the Forest. The audit team sees this as a best practice.

Best Practice 1: Weyerhaeuser is to be commended for its pioneering efforts in achieving 3rd Party CSA Chain of Custody Certification and the successful development of its ISO Environmental Management System and accompanying booklet.

MNR also has policy statements that address its commitment to sustainable forest management. These are reflected in:

- Statement of Environmental Values
- Our Sustainable Future (2005)

While these statements are not posted on any of the large display boards in the Dryden MNR office, booklets are readily available and Our Sustainable Future is available from the public MNR website. MNR Staff are well aware of the mission statements, and this is reflected in their attitude and daily activities.

3.2 Public Participation

3.2.1 Local Citizens Committee

The Dryden LCAC was formed in 1996. Its Terms of Reference was revised in September 2004 to reflect the updated requirements of the 2004 FMPM. Review of the LCAC profile confirms that the Committee represents a balance of interests as required. An exception is the lack of First Nations participation since November 2002, when the aboriginal representative was removed from the Committee for non-attendance at meetings. The last meeting he attended was in April 2002. Up to and including May 2001, he was the chairperson and attended regularly. Since then, attempts to gain Aboriginal representation on the Committee have failed.

The FMPM (2004) recommends that Aboriginal communities should be represented on Local Citizens Committees. While not a binding requirement, the prominence of Aboriginal communities on the Forest and their current level of involvement in forest management operations would suggest it is important that MNR evaluate its current strategies and develop new approaches to encourage Aboriginal participation on the LCAC to meet the intent of the FMPM (see Section 3.2.3). This should also include efforts to gain Aboriginal representation on the planning team which also lacked Aboriginal representation for the 2003-2008 FMP although this was not specifically a requirement of the 1996 FMPM (see Section 3.3.1). Evidence suggests that the temporary reassignment of senior MNR District staff has resulted in some loss of continuity with respect to First Nations communications and may be a contributing factor to the loss of faith in the forest management planning process by Aboriginal communities (see Section 3.2.3). Aboriginal representation on the LCAC and planning team may be important to MNR meeting the requirements of Condition 34 of "MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario".

Suggestion 1: MNR should evaluate its current strategies and develop new approaches to secure First Nations participation on the LCAC and planning team.

Snowmobile clubs are another constituency that continue to lack representation on the LCAC. While Weyerhaeuser staff communicated with various snowmobiling interests during the audit term to minimize the impact of harvesting and hauling activities on snowmobiling, some concern was expressed to the audit team over disruptive road grading practices adjacent to snowmobile trails. Given the economic and recreational importance of this activity, the Committee should endeavour to recruit members representing this interest in the future.

Suggestion 2: The LCAC should attempt to recruit a member with a general interest in snowmobiling or membership in a snowmobile club.

Generally, the LCAC has performed extremely well. Meetings were held monthly except for December and the summer months of July and August. Occasionally, the June meetings were forfeit with meetings held alternately in July. The LCAC has been characterized by stable membership over the last three years with excellent performance by the Chair. Occasionally, there were discussions beyond its mandate, but generally the LCAC has remained focussed. All members had a high degree of confidence in their Chair and demonstrated that they have a sincere interest in the process and provide useful advice to the District Manager and planning team.

There is also a good record of MNR training and support with MNR Area Managers alternating in their responsibility to oversee and manage activities, depending on which FMP process is placing the most demand on the LCAC (e.g., Dryden or Wabigoon Forests). However, because of MNR staff turnover and acting assignments, recent years have seen greatly diminished attendance at meetings by the District Manager. This is of some concern since the Terms of Reference stipulate that the District Manager shall attend at least one meeting per quarter and any meetings that involve the selection of new members.

Suggestion 3: The MNR District Manager should attend at least one LCAC meeting per quarter.

In addition, the FMPM requires that joint meetings be held with the planning team at agreed upon stages of the planning process. Although many aspects of the planning process were discussed in depth at LCAC meetings, there is no evidence that joint meetings were held with the planning team.

Recommendation 1: In planning for the 2008-2018 FMP, MNR must ensure that joint meetings are scheduled with the LCAC and planning team at agreed upon stages of the planning process.

According to the LCAC Terms of Reference, members do not specifically represent the interests or positions of groups or individuals. This approach was agreed upon to avoid position taking and foster constructive dialogue. Interviews with the majority of members confirmed that meetings are conducted in an open and inclusive manner and that an individual's interests and viewpoints are respected.

Although this approach certainly contributes to the Committee's functionality, it comes with some risk that key constituencies could be overlooked if members failed to communicate information to individuals, organizations and the general public as required in the Terms of Reference. Accordingly, LCAC members should remain aware of their responsibilities and consider the occasional use of news releases. Ultimately, the LCAC's demonstrated efforts towards community outreach and recruitment through its website, interpretive trail initiative and other projects sufficed to meet this requirement.

A review of minutes confirmed that the Committee has largely fulfilled their responsibility to monitor FMP implementation. The minutes showed that sufficient review and categorization of amendments took place as required by the FMPM and as a recommendation in the previous IFA in 2000. The minutes also showed that AWS targets were regularly reviewed. In contrast, the minutes provide little indication that MNR ARs were regularly reviewed as recommended in the 2000 IFA. Specifically, the minutes indicate that MNR ARs were only discussed in May 2001 and November 2003. However, MNR provided evidence after the audit site visit that AR summaries for the 2002/03 and 2003/04 operating years were provided to the LCAC.

The LCAC Summary Report included with the 2003-2008 FMP adequately discussed various problems and issues addressed by the Committee and commented on the level of MNR support provided. Generally, the body of the report reads as a listing of FMP related topics extracted from the minutes of meetings held during the planning process. However, it lacks the FMPM required assessment of Committee structure and recommendations for change. To improve the quality of the future reports, MNR should provide greater guidance to the LCAC with respect to meeting requirements.

Suggestion 4: MNR should provide greater guidance to the LCAC to ensure that its Summary Report includes all required components as specified in the FMPM.

3.2.2 FMP Standard Public Consultation Process

The methods used to communicate with the public were generally in accordance with FMPM (1996) requirements for the standard public consultation process. Although letters for the 2003 FMP's Public Consultation Process were mailed in a timely manner and notices followed the required formats, public notice timing requirements were not followed for both the First and Second Information Centres. Specifically, advertisements for the Sioux Lookout Bulletin and Ignace Driftwood were published only a week before the First Information Centre and two weeks before the Second Information Centre. Although any failure to meet FMPM public notification requirements is a serious matter, the audit team believes this non-conformance had little material consequence since timely notice was provided in two other newspapers and more than 900 letters with attached public notices to stakeholders, First Nations and Aboriginal associations with potential interest in the Forest. Also, Weyerhaeuser produced concurrent television and radio advertisements and distributed notification pamphlets that exceeded the minimum FMPM requirements. One recommendation and two suggestions are found in Sections 3.3.1 and 3.3.8 to address the key contributing factors that resulted in intense production pressures, production delays and at least two process omissions.

To complicate matters, the Ontario Public Service Employees Union (OPSEU) strike in the spring of 2002 resulted in some MNR products being unavailable for the Second Information Centre. This resulted in the need for a supplemental Information Centre to make these products available for public review. Subsequently, public notice requirements for draft plan review and public inspection of the MNR approved plan were in conformance with FMPM requirements. Although there were issues that had to be addressed during the planning process, there were no requests for issue resolution. Similarly, there were no requests for "bump-up" to an individual environmental assessment (EA) following MNR approval of the final plan.

Most Information Centre respondents were satisfied with the quality of the material provided and indicated that both MNR and Weyerhaeuser were responsive to their inquiries. Several respondents indicated that display materials were overly complicated and should be simplified to make them more understandable to the general public.

3.2.3 Native Peoples Consultation

There are six Aboriginal communities within or adjacent to the Forest with interests in forest management. These include: 1) Wabigoon Lake Ojibway Nation (WLON), 2) Eagle Lake First Nation, 3) Lac Seul First Nation, 4) Wabaskang First Nation, 5) Whitefish Bay First Nation, and 6) the Aboriginal Peoples of Wabigoon (a self-declared Metis community). Noopiming Anokeewin is a native-owned logging company with close ties to Wabigoon Lake First Nation. Except for Whitefish Bay First Nation, all communities have been active on the Forest during the audit term through logging and/or silviculture.

Weyerhaeuser's Policy and Framework for Building Relationships identifies benefits to First Nations through indirect and direct employment, education and training. Weyerhaeuser has a record of substantial achievement through First Nations participation in harvesting, pre-commercial thinning, seedling production and student employment.

In addition, Weyerhaeuser should be commended for its support of the new business developed by WLON to distribute industrial cleaning supplies. Marketing of products is done by WLON in association with Acklands. Products distributed by WLON have been tested and found effective in the Dryden pulpmill and are now being purchased on a regular basis. Based on the success of these products in the Dryden mill, the products are now

being tested at other Weyerhaeuser sites in Ontario and throughout Canada through Weyerhaeuser's central purchasing departments. Other WLON products include wild rice energy bars. The audit team feels that Weyerhaeuser's support for this type of activity is unique in Ontario and deserves a best practice.

Best Practice 2: Weyerhaeuser is to be commended for its support of new business enterprises developed by WLON.

The most active Aboriginal participant in forest management on the Forest is Noopiming Anokeewin which operates under Weyerhaeuser licence and approvals in the same manner as other limit contractors. Eagle Lake First Nation also has a modest harvest allocation on the Forest. Logging contractors from Eagle Lake First Nation operate on Overlapping Forest Resource Licences held by Eagle Lake First Nation. Actual harvest volumes in 2004/05 were 77,000m^3 for Noopiming Anokeewin and 13,000m^3 for Eagle Lake. More than 500,000m^3 were harvested by these groups during the term of the audit.

WLON also has contracts to provide nursery seedlings to both Weyerhaeuser and Bowater through its greenhouse grower, Wabigoon Anishnaabe Gitigewin. Although the greenhouse suffered significant snow damage in 2004 and is currently out of production, the greenhouse normally provides approximately three million seedlings annually to Weyerhaeuser. Plans are currently underway to rebuild the facility and it is expected to be back in production by 2006. Comparatively, this level of First Nations participation in forest management is impressive.

WLON and Lac Seul First Nation actively participate in Weyerhaeuser's pre-commercial thinning program while the Aboriginal Peoples of Wabigoon participate less frequently through other contractors. More than 500ha were pre-commercial thinned during the term of the audit. Weyerhaeuser also offered summer jobs to students from WLON, Eagle Lake, Lac Seul and Wabaskang.

Documents and correspondence indicate that proper protocols and timelines were followed with respect to the Invitation to Participate provided to each Aboriginal community for the 2003-2008 FMP process. Initially, no communities chose to participate in either the Standard Public Consultation Process or the separate Forest Management Native Consultation Program. Historically, reasons for non-participation in forest management planning processes included: a) fear that participation may prejudice ongoing Treaty rights negotiations with the Federal Government; b) lack of trust of the Provincial Government; and, c) limited capacity to engage in a meaningful manner.

Despite this, the newly elected Chief of WLON requested participation in the Native Consultation Program late into the process. This request was initially made in April 2002, following the Second Information Centre. The letter was not acknowledged by MNR as it was either undelivered or mislaid. A second request was received in July 2002, following draft plan submission. Although sincere efforts were made to accommodate this request, it became clear that it was simply not feasible to implement the Native Consultation Program at such a late stage in the planning process and still meet the remaining deadlines for plan development and approval. Draft native background information reports were prepared in a timely manner and no new native values were identified.

With respect to the implementation of Term and Condition 77 of the Class EA decision[5] (now Condition 34 of "MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario"), MNR has worked to facilitate the provision of raw material for WLON's proposed value-added facility. Progress appears to have stalled with the failure to secure a suitable wood supply and the temporary reassignment of the District Manager to other duties. WLON expressed frustration with the reallocation of wood supply from the closing of Weyerhaeuser's stud mill in Dryden to Weyerhaeuser's facility in Ear Falls. Also, it has expressed frustration with the inability of Weyerhaeuser to provide processed blanks in metric dimensions for WLON's proposed product line. Presently, WLON's Finnish partner is withholding further financial support for the project until a reliable wood supply with the desired specifications

[5] Koven, A. and E. Martel. 1994. Reasons for Decision and Decision – Class Environmental Assessment by the Ministry of Natural Resources for Timber Management on Crown Lands in Ontario. Ontario Environmental Assessment Board.

is secured. Given the inability of Weyerhaeuser to provide material to metric specification, it is WLON's contention that it should be given its own wood supply to enable the project to move forward.

WLON generally believes that MNR has attempted to implement Term and Condition 77 (now Condition 34) in bad faith. MNR contends that it should be implemented at the community level and that WLON is placing too much emphasis on forest-level planning to achieve its objectives. The audit team has received indication from both parties that regardless of their differences, they want any future negotiations to be targeted toward specific objectives.

Much of the frustration experienced by WLON was due to the turnover and temporary re-assignment of MNR staff to other duties. Although MNR did have a part-time First Nations Liaison position in the past, it was abandoned because the position involved an awkward sharing of duties with the Area Supervisor who had more direct contact and authority to deal with First Nations. The Area Supervisor was subsequently assigned as the lead for local First Nations contact, however effectiveness has recently been hindered by temporary reassignment and the resulting loss of continuity. The audit team believes that the most appropriate contact with First Nations remains at the Area Supervisor or District Manager level.

Prior to the negotiations associated with the value-added proposal WLON approached MNR to sign a letter of intent defining the nature of its relationship and the type of negotiations that would be held. Although MNR was concerned about how it might be used, a draft letter of intent was produced. It has not been presented to WLON for their consideration. Although the audit team has not reviewed the letter, it might provide a suitable framework for ongoing negotiations and the exchange of information. Accordingly, the audit team urges MNR to present the draft letter to WLON for their consideration.

Finally, in consideration of the prominence of First Nations and involvement of Aboriginal peoples in forest management operations on the Forest, the audit team believes it is critically important that MNR evaluate its current strategies and develop new approaches to encourage dialogue and the exchange of information with willing First Nations.

Recommendation 2: MNR must establish a mutually-agreeable framework for ongoing targeted dialogue and the exchange of information with willing First Nations.

Suggestion 5: MNR should consider designating a full time First Nations liaison person or committee with sufficient authority to deal with First Nations.

3.2.4 Annual Work Schedules Public Inspection

A public notice for the inspection of an AWS is required 15 days in advance of the commencement of operations. The auditees met the requirements of the FMPM with one instance of non-conformance as the 2001/02 inspection notices were five days later than required. This was due to the absence of MNR unionized staff during the OPSEU strike and the increased workload for other staff. MNR correspondence files were well organized and provided clear documentation of public notice. There was no insect pest management activities reported during the audit period.

3.3 Forest Management Planning

3.3.1 Planning Team Activities

The review of planning team activities focussed on the production of the 2003-2008 FMP for the Forest. Terms of Reference formalized the establishment of the planning team and contained a detailed schedule for plan production, review and approval.

The Terms of Reference was not approved until May 4, 2001, some four months after the Invitation to Participate and 3½ months after the first planning team meeting on January 16, 2001. Because of the late start in plan production, it included a compressed production schedule and reduced allowance for MNR review of the draft plan. The Terms of Reference was subsequently amended twice to accommodate delays in production and turnover of planning team members.

The FMPM (1996) states that, "the terms of reference, which must be approved by both the MNR District Manager and the MNR Regional Director, are the means of gaining approval to proceed with planning". The FMPM (2004) is even more explicit, stating that, "the terms of reference must be

approved by the MNR District Manager and the MNR Regional Director in order to proceed with planning" and that, "the terms of reference will be approved prior to issuing the first public notice of the formal public consultation process". This requirement was not satisfied.

Recommendation 3: MNR must ensure that the Terms of Reference for the 2008-2018 FMP for the Forest is approved prior to submission of the first public notice of the formal public consultation process as required by the FMPM (2004).

Planning team membership included sufficient representation of resource professionals and members of the LCAC to address planning requirements, but lacked First Nations representation. Although this was not specifically a requirement of the 1996 FMPM, it is common practice in many MNR Districts to include First Nations representatives on planning teams. Given the significant presence of Aboriginal peoples on the Forest, the audit team believes that MNR must make every effort to secure representation of local Aboriginal Communities on the planning team for the next FMP. A suggestion to involve them is made in Section 3.2.1.

Meetings were held frequently – 18 were held from January 2001 to December 2002. Generally, sufficient background information and resources were made available to planning team members for them to fulfill their role in planning. However, they were forced to cope with difficult circumstances to deliver the FMP by the deadline. For example, FRI development was ongoing and resulted in continual Sustainable Forest Management Model (SFMM) re-modelling and the need to adjust allocations.

As a result, the First Information Centre was three weeks late and the Second Information Centre was four weeks late. To complicate matters further, the OPSEU strike in the spring of 2002 resulted in some MNR products being unavailable at the time of the Second Information Centre. This resulted in the need for a supplemental Information Centre to make these products available for public review. In spite of this, the production delay was reduced to two weeks with submission of the draft plan on July 10, 2002.

The draft plan review and approval process was more difficult than originally anticipated. The workload associated with MNR review of the draft plan was exacerbated by the additional burden of continuing Resource Stewardship Agreement (RSA) negotiations, ongoing FRI work and SFMM remodelling (see Sections 3.3.2 and 3.3.8). Although the development of a contingency plan was considered in December 2002, the decision was made to proceed without one (see Section 3.3.10) and the final plan was submitted 10 weeks late on February 1, 2003, and approved by MNR on February 13, 2003.

Key contributing factors to production delays were the late start in the planning process, underestimating the amount of work involved with developing a Forest Information Manual (FIM) compliant inventory for use in the planning process, and the compressed draft plan review period in the original Terms of Reference. Although the plan was ultimately approved in time for operations to commence on April 1, 2003, a suggestion is made in Section 3.3.8 to avoid similar future production delays.

Correspondence shows that both Weyerhaeuser and MNR were open to meetings with the public and were active in seeking the opinions of stakeholders. Many meetings were held with stakeholders and members of the public in addition to the normal opportunities for public consultation.

MNR correspondence binders were well organized and included summaries of public consultation. These summaries were used to track comments and responses, and to indicate how issues were resolved through the planning process and concerns were specifically addressed in the plan. MNR should be commended for its diligence in compiling this information. These summaries are among the most detailed encountered by some members of the audit team.

A review of these summaries suggests that the planning team responded to public inquiries in a timely manner with few exceptions. It suggests that the vast majority of public concerns were effectively addressed in the FMP, although there were a few notable exceptions. Some of the exceptions related to measures from previous plans that were not carried forward to the current plan. For example, one stakeholder believed that specific access

management strategies in the 1993-1998 FMP would continue to apply in subsequent plans and that his interests would continue to be respected. Thus, he neglected to review and comment on the 1998-2003 FMP. Since no comments were received and operations did not proceed in his area of interest, he was unaware that the original measures no longer applied until the implementation of the 2003-2008 FMP. Once operations began, the individual was "surprised" by activities that appeared to be contrary to measures in place in 1993. There had also been movement of staff within Weyerhaeuser and MNR during this time, thus all parties were caught equally unaware of the issue.

Although such cases are the exception, they could lead to doubts about the planning process. To minimize the frequency of such occurrences in the future, the audit team suggests that both MNR and Weyerhaeuser should improve their performance with respect to tracking issues and concerns from plan to plan.

Suggestion 6: MNR and Weyerhaeuser should develop effective mechanisms to monitor, anticipate and address stakeholder issues and concerns from plan to plan.

3.3.2 Resource Stewardship Agreements

The Management Guidelines for Forestry and Resource-Based Tourism[6] (RBT) of July 2001 (the "Tourism Guide") were developed to help Ontario's tourism and forest industries negotiate RSAs and facilitate effective forest management planning. These guidelines were written to accompany the Tourism and Forestry Industry MOU[7] (2000) which established the framework for negotiating RSAs and encouraged resource-based tourism and forestry industries to co-exist and prosper.

Direction contained in a letter distributed with the Tourism Guide and the Tourism and Forestry Industry MOU dated August 1, 2001, states that RSA proposals would normally be developed prior to the beginning of a forest management planning process. This is consistent with the Tourism Guide which then states that, "The RSA negotiation process will normally be completed prior to the Invitation to Participate in the FMP process and completed for the First Information Centre Open House"[8]. In spite of this, the letter then states that, "every reasonable effort will be made to pursue the development of RSAs" for 2003-2008 FMPs. However, in order for this process to work, consultation with RBT operations and RSA negotiations would ideally take place during the several months prior to the FMP Process Invitation to Participate as indicated in the Tourism Guide.

Unfortunately, this was not possible for 2003-2008 FMPs, given that the planning process had already been initiated several months earlier. In this case the Invitation to Participate for the 2003-2008 FMP occurred on January 2, 2001, a full six months prior to publication of the Tourism Guide and eight months prior to the formal direction provided on August 1, 2001. In spite of this untimely direction, letters were sent to 58 RBTs on May 3, 2001, inviting them to participate in the RSA process.

Initially, little interest was expressed in the RSA process (few affirmative responses to the May 3, 2001 mailing). However, interest grew well into the FMP process with RSA implementation workshops being held and funding provided to RBTs through the Ministry of Tourism, Culture and Recreation. With this funding, consultants were made available to RBTs to assist with the collection of background information and the negotiation of RSAs. Interested RBTs indicated there was a great impetus to negotiate RSAs for the 2003-2008 FMP since the funding for consultant support would not be available beyond the first year of Tourism Guide implementation.

Overall, both Weyerhaeuser and MNR personnel demonstrated efforts to implement the RSA process. Several scoping sessions were held with interested candidates, many of whom initiated discussion and entered negotiations with Weyerhaeuser. These efforts were hindered by the challenging timelines and inflated expectations of RBTs who had been provided with funding and contractor services. Other complicating factors included a lack of example RSA documents and protocols, turnover of MNR and Weyerhaeuser contacts, the concurrent FMP workload and failures in communication and the

[6] Forest Management Branch 2001. Management Guidelines for Forestry and Resource-based Tourism. Ont. Min. Nat. Res., Queen's Printer for Ontario, Toronto, ON.

[7] RSA Steering Committee 2000. Tourism and Forestry Industry Memorandum of Understanding (*MOU*).

[8] Page 27, bullet 5).

translation of commitments between the RSA and FMP processes.

In the worst case, the audit revealed that one RBT replied to the original mailing and indicated interest in RSA negotiations with Weyerhaeuser. Six months later, the RBT had not yet received a reply from Weyerhaeuser. After contacting MNR, the RBT received a letter from MNR indicating that the plan author had been contacted and would soon contact the RBT. Three weeks later, the RBT received a letter from Weyerhaeuser stating that "it is never too late" to enter RSA negotiations and making the commitment to hold a scoping session with MNR. However, communications lapsed again and there was no further follow-up with the RBT.

Understandably, many local RSA candidates became frustrated with the lack of progress and gave up on negotiations while others simply lost interest and were content to rely on negotiated AOC agreements to protect their short term interests. Even though no RSAs were signed, negotiations nevertheless resulted in the creation of draft RSAs and ongoing files that will be useful in tracking issues from the current FMP to the next. As required by the FMPM, appropriate references to the RSA process were included in the 2003-2008 FMP.

In hindsight, the premature implementation of the RSA process concurrent with the FMP process resulted in pointless work and frustration for all involved. Corporate MNR must ensure that such needless effort does not occur in the future as a result of policy direction or the implementation of guides. Although Declaration Order MNR-71 dated June 25, 2003 (MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario) states that any new or revised guides shall specify how requirements come into effect with scheduled FMP renewals (Condition 38.a), this alone will not ensure that stated phase-in provisions are necessarily sensitive to the capacities and workload of affected parties. Similarly, MNR-71 only conditionally recommends that new or revised guides be pilot tested to assess their effectiveness and efficiency in application prior to approval for implementation (Condition 38.e). Finally, MNR-71 only applies to forest management guides and does not stipulate similar precautions for other forms of direction. Thus, additional precaution is required by Corporate MNR to ensure that such situations do not occur in the future.

Recommendation 4: Corporate MNR must test the methods of implementation for any new or revised guides and establish realistic phase-in requirements that adequately consider the potential impacts on existing processes and the capabilities of affected parties to implement the requirements.

Finally, Weyerhaeuser should also develop mechanisms to improve communication and the translation of RBT commitments between future forest management planning and RSA processes to minimize the potential for communication lapses and inharmonious relations with RBTs.

Suggestion 7: Weyerhaeuser should develop mechanisms to improve communication and translation of RBT commitments between the forest management planning and RSA processes.

3.3.3 Sources of Direction

The 2003-2008 FMP lists the relevant provincial policies, regional strategic direction, District Land Use Guidelines and local resource management plans that were used to develop the plan. There was an extensive list of the manuals used in preparing and implementing the plan, in Appendix B of the FMP. With the exception of Annual Compliance Planning and Reporting and meeting wildlife tree retention requirements (see Sections 3.4.1, 3.4.2, and 3.6.1), field activities were found to be in compliance with the FMP, Management Guides and Other Sources of Direction.

Objectives have been identified for all four areas required to be identified in the CFSA, namely: forest diversity, social and economic matters, provision of forest cover and silviculture. For each objective identified, the plan provides a fairly extensive list of general strategies that will be used. While many of the strategies identified meet more than one objective, those that are not related to SFMM are not very specific and do not identify concrete targets. For example, the description for working with First Nations was found to be quite vague and non-committal.

Weyerhaeuser has done a good job in recognizing the roads that need to be re-classified from tertiary to secondary and primary based upon the length of use. There was also a good description of how

areas were selected for harvesting and silvicultural treatments.

With respect to monitoring and assessment, the plan outlines monitoring responsibilities for both Weyerhaeuser and Overlapping Licensees. The Forest Operations Information Program focuses on AOC planning and the identification of new values that may be discovered during plan implementation. Monitoring the exception to allow for full tree harvesting on shallow sites is further discussed in a separate section of the plan and identifies that Weyerhaeuser is participating in the regional study to determine the impacts of full tree logging on shallow or sensitive sites.

One of the requirements for compliance planning is to examine past compliance problems and to identify training requirements to prevent similar occurrences from being repeated. The audit team found it surprising that there was no discussion on the application of the Natural Disturbance Pattern Emulation Guideline (NDPEG) to retain 25 trees per hectare, especially when the previous IFA identified that the Company had failed to leave the 6 trees per hectare required for the Marten Guidelines.

3.3.4 Introduction to the Forest Management Plan

The Ontario Environmental Bill of Rights (EBR) requires MNR to prepare a Statement of Environmental Values (SEV). In developing the SEV, MNR outlines its goals, objectives and strategies to achieve the principles outlined in the EBR. The audit team reviewed the SEV as part of MNR's commitment to sustainability and found that the SEV briefing note was prepared and signed for the 2003-2008 FMP as required. As well, the index to the EA components of the plan was in compliance with the FMPM.

3.3.5 Management Unit Description

The current forest condition section in both the 1998-2003 and 2003-2008 FMPs included all the required sections. However, both FMPs lacked some management interpretations in those sections that describe the physical environment, contrary to the FMP requirements of the day (FMPM 1996). The rationale for the shallow FU (Sh_ALL) is provided in the 2003-2008 FMP to track ES11/12. This is a significant improvement that can be built upon in the future. Although the new FMPM (2004) no longer requires interpretations in this section, it may be worthwhile reinforcing this section to support forest management strategies and practices described later in the plan.

Suggestion 8: Descriptions of landforms and other physical features should be expanded and include management interpretations in the next FMP.

The 1999 FRI was used as a basis for the planning inventory. The inventory was converted to the NAD83[9] projection and was enhanced to meet FIM requirements. Recent depletions and accruals (FTG information) were incorporated up to the 2002/03 period and stand ages were updated to 2003. Weyerhaeuser also attempted to bring historical silvicultural treatments into the updated land base, but experienced difficulties in transforming the information from the old mapping projection. MNR has experienced difficulties with providing up-to-date ownership and management unit boundaries.

Considerable efforts were made by both Weyerhaeuser and MNR to update the land base to meet the requirements of the FIM. However, the process was found to be frustrating and divisive. The planning inventory was not approved until November 2002, which is very late in the planning process, and caused a delay in finalizing the modelling.

Weyerhaeuser is continuing its efforts to improve the inventory, especially where stand ages are incorrectly identified and to update the barren and scattered areas with FTG and silvicultural information. The Management Unit boundary between the Whiskey Jack and the Wabigoon Forests has yet to be resolved by the MNR.

Difficulties in meeting all of the new FIM requirements for companies and MNR Districts have been experienced across the Province. These problems should be incorporated into the training messages provided by MNR to planning teams. Consideration needs to be given by all parties for the tremendous workload required to prepare the Planning and Stewardship Inventories. Forest Managers (SFLs and MNR) need to ensure that

[9] North American Datum 83 – A current, MNR accepted method of projecting the earth's curved surface onto a flat map.

sufficient resources are in place to prepare and update the planning inventory. Due to the difficulty experienced by the 2003 planning team, the audit team makes the following recommendation and suggestion.

Recommendation 5: Forest planning inventory responsibilities for both Weyerhaeuser and MNR must be clearly identified in the Terms of Reference for the FMP.

Suggestion 9: Difficulties encountered in preparing the inventory should immediately be brought to the attention of the Steering Committee for the Plan or the District Manager.

The description of the current forest condition identified that a number of areas on the Forest are highly fragmented with numerous irregular boundaries (for example, Wabigoon East, Gullwing and the Colenso areas). One factor attributed to this increase in forest fragmentation has been the application of the moose guidelines. The description also identified that past harvesting and renewal activities and fire control measures have resulted in more balsam fir being present on the Forest and less pure stands of jack pine. It is expected that forest fragmentation will increase further with the application of the insular and peninsular requirements of NDPEG. The current FMP identifies that all planned clearcuts are required to meet insular and peninsular requirements, however the MNR has recently provided further clarification on the implementation of this new guide for smaller planned clearcuts that may be of some assistance in reducing fragmentation. Based upon the recent Questions and Answers paper, the audit team makes the following recommendation.

Recommendation 6: Weyerhaeuser and MNR must address the issue of insular and peninsular requirements of NDPEG in disturbances less than 100ha and must amend the current FMP as appropriate.

Marten was the only featured species for the 1998-2003 FMP, while moose, marten and white-tailed deer were the featured species for the 2003-2008 FMP. The 2003-2008 FMP states that, "The Woodland Caribou (foraging and winter) can be a locally featured species, however the Forest is located south of the Caribou's range, therefore habitat for the species will be reported a regionally select species but not actively managed as a locally featured species". This was consistent with the direction of the FMPM.

The discussion of caribou is the only discussion specific to rare, vulnerable, threatened or endangered species. The 1998-2003 FMP and the 2003-2008 FMP did not provide adequate discussion specific to rare, vulnerable, threatened or endangered species as required. The only mention of these species in the 1998-2003 FMP was a reference to the "Endangered and Threatened Species Guideline (bald eagle, golden eagle, peregrine falcon)" in its listing of information used in plan preparation. The 1996 FMPM required that a description of "...the contribution from, and importance of, the management unit in supporting...rare, vulnerable, threatened and endangered wildlife species must be provided." The 2004 FMPM has similar requirements related to "...species that are classified as special concern, threatened or endangered." Since it is important to demonstrate to the public that these species have been provided due consideration in the preparation of the FMP, the audit team makes the following recommendation.

Recommendation 7: Weyerhaeuser must ensure that the next FMP includes a description of species that are classified as "of special concern", threatened or endangered as required in the 2004 FMPM.

Values information is a key component of forest management planning for ensuring that the integrity of non-timber values are maintained during and after the completion of forest management activities. For the preparation of the 2003-2008 FMP, values information was collected and recorded by MNR as required. Values maps and MNR survey information, including field notes and maps, were reviewed by the audit team. MNR survey information was inspected and noted values were recorded on Values Maps for use in the planning process. Values maps were complete and met format requirements of the FIM.

Members of the planning team identified areas preliminarily selected for harvest. This information was, in turn, used to target surveys directed at the

collection and validation of values information for timely consideration in the planning process. MNR direction ensured that resources were focussed on these areas resulting in efficient and effective use of values information collection.

The FMPM (1996) states that the district or community socio-economic profile must be appended to the FMP, and a summary must be included in the plan text. The requirement to append the socio-economic profile to the FMP has been fulfilled, however the requirement to include a summary in the plan text was not met. The summary should describe the components of the socio-economic profile most affected by operations for each of the subject areas of the profile (e.g., demographics and migration, economic environment and investment intention).

Although the specific requirements have changed in the 2004 FMPM, it remains a requirement to prepare demographic profiles for communities that receive substantial amounts of forest products from the management unit or benefit through forest-industry related employment. It is also a requirement to prepare demographic profiles for Aboriginal communities in or adjacent to the management unit whose interests or traditional uses may be affected by forest management activities. Finally, the plan must also include a description of the industrial and non-industrial uses of the Forest organized by sector. The audit team urges Weyerhaeuser and MNR to take steps to ensure that the 2008-2018 FMP meets these requirements.

3.3.6 Objectives and Strategies/Management Alternatives

The audit team examined how the planning team developed objectives, analyzed alternatives and selected an alternative for implementation for the 2003-2008 FMP. SFMM was used to analyze forest management alternatives. Many data inputs and assumptions related to the available and reserved forest land base, growth and yield dynamics, wildlife habitat requirements, and management constraints were used within SFMM. Detailed SFMM outputs for each management alternative were documented and evaluated in terms of how they best met the FMP objectives. All of these data sets were examined by the audit team and were deemed to meet FMPM requirements.

The CFSA requires four broad objective categories to be addressed in the 2003-2008 FMP (i.e. forest diversity, social and economic, provision of forest cover, and silvicultural/harvest). These categories were properly covered and a total of 14 FMP objectives were defined by the planning team. The "provision of forest cover" category had objectives that were grouped and assimilated into other categories dependent upon whether they were intrinsically forest diversity objectives, or social and economic objectives. Some objectives contained specific strategies and numeric targets, while other objectives did not. For those objectives that defined specific targets the SFMM management alternative outputs were consistent with those targets. Section 3.7.1 lists the objectives developed in the plan and assesses the level of achievement during the audit term.

The four required mandatory alternatives and one additional management alternative were developed and evaluated by the planning team. These included: Nature/Null (bounds of natural variation, BNV) where no harvest occurs and wildfire is the only source of forest depletion and renewal, Timber Production Potential (TPP) with an infinite level of silviculture funding, TPP with balanced silviculture funding, DEMAND where harvest levels meet Regional wood supply targets, and a selected management alternative (SMA) developed by the planning team on the basis of exploratory analysis and public input. These management alternatives all shared common SFMM model inputs and assumptions with the exception of silviculture investment levels. The marten deferrals, minimum wildlife preferred habitat targets and other biological constraints were shared between all alternatives.

The SMA differed from the DEMAND alternative in the conifer (Spruce-Pine-Fir, SPF) and hardwood volume targets. The SMA had a more stable wood supply than the DEMAND alternative. The stability required the harvest of less wood in Term 1, thereby making more wood available in the future. This had the effect of mitigating the severity of the wood supply fluctuation that would otherwise have occurred under the DEMAND alternative.

All the management alternatives produced potential outcomes that were consistent with the objectives because similar SFMM modelling constraints were equally applied to them all. Therefore, they all explore differing shades of grey rather than a

diverse range of alternatives. This situation exists in northwestern Ontario as a result of MNR training and direction. The approach to the analysis, while conforming to current policies and procedures, misses the opportunity to consider other diverse management alternatives.

The tables and text in FMP section 2.3.4.2 identified the criteria and contrasted the four alternatives to the null alternative. The results supported the goal of sustainable forest management and the achievement of management objectives (to only slightly differing degrees). Brief and periodic under-achievement of wildlife habitat and forest diversity objectives were identified. These situations (>20% below BNV) were evaluated as being not indicative of any long term continued trend, and hence sustainable. The FMP identified that there will be a shift in FU distribution and age classes (Section 2.3.4.2.2) away from the mixedwoods and toward more pure conifer and hardwood dominated stands. This was believed to be consistent with a more natural historic forest condition.

The results from the various SFMM cases matched the data listed in Tables FMP-9, FMP-12, FMP-14, FMP-15, and the FMP-12 series tables. These are the results upon which the determination of sustainability were made, including the available harvest area (AHA) and future forecasted forest conditions. The SFMM output file for the SMA showed that the AHA by FU and age class in the plan was consistent with Table FMP-18 exactly.

It is also clear from FMP-18 that a significant degree of age class substitution (as compared to the AHA) was forecasted with the planned allocations. The legal obligation is to match the AHA by FU, not by age class, however this is desired wherever possible. The reason that such age class substitution existed is because Weyerhaeuser and MNR needed to move toward the NDPEG implementation. In order to satisfy the NDPEG goals of distributing the clearcuts into size classes across the landscape, age class substitution became inevitable. This was understood by Weyerhaeuser and MNR as being a short term situation that ideally would be somewhat mitigated in the next five year term.

The 2003-2008 FMP stated that, "Given current forest management guidelines, the Forest cannot sustainably supply the quantity of timber suggested by the regional volume target". Objective 8, "a predictable and continuous wood supply" can be met. However, the regionally prescribed volume levels (as expressed in the DEMAND alternative) concern the audit team. The 2003 SMA SFMM case specified annual conifer and hardwood volume targets of 725,000m^3 and 310,000m^3 respectively for the first term. These targets are then projected to decline over the next two future terms until they stabilize at 530,000m^3 and 180,000m^3 respectively during term four. In contrast however, the DEMAND case specified 787,000m^3 conifer and 289,000m^3 hardwood for the first term. While the DEMAND targets could be achieved in the first term only, it would result in a steeply declining wood supply for eight future terms.

The short term SMA wood supply targets were lower than the DEMAND, and result in a stable wood supply within 40 years. Clearly, the short term wood supply targets expressed in the SMA provide for more medium term stability than DEMAND. Therefore, MNR and Weyerhaeuser should take action to assess the Regional volume targets to ensure that the DEMAND volumes can be achieved sustainably over the medium term.

Recommendation 8: MNR and Weyerhaeuser must review the Regional wood volume targets for the Forest to ensure that these volumes can be met sustainably, not only in the short term, but also throughout the medium term.

3.3.7 Operational Planning

The 2003-2008 FMP identified the criteria used to select planned allocations and contingency areas. The criteria were based upon: age, accessibility, avoiding wildlife habitat (marten cores), natural boundaries, and the ability of the stands to meet industrial requirements (products and economic considerations). Proposed harvest areas were modified to consider other users and AOCs. After the Second Information Centre and Draft Plan submission, they were re-evaluated to reflect changes in the SFMM.

A total of 99% of the AHA was planned for harvest and no FU was allocated above the level identified in the SFMM. The allocations were well selected to ensure that the age-class distribution of proposed allocations followed the age classes identified by SFMM. The level of substitution was reasonable and discussed in the text of the plan. The proposed

disturbance frequency by size class does a good job of moving the Forest towards the natural forest condition. Efforts were made during the allocation process to decrease the number of small disturbances. Overall, a good job was done in selecting the harvest allocations to match the outputs of the SFMM.

Forecasted harvest volumes closely matched the volumes identified by SFMM and minor differences were explained. In total, planned harvest volumes were 1.4% lower than the target volumes identified by SFMM. They were actually 5.9% less for conifer volumes and 2.4% higher for hardwood volumes. All planned harvest volumes were expected to be utilized.

One year of contingency harvest operations area was identified in the FMP. Contingency areas were areas for replacement if some unplanned event, like fire, occurred in the allocated areas. The text of the plan identified that any use of the contingency area for replacement requires MNR approval and will be considered an amendment to the plan, even though these areas have been reviewed by the public and other stakeholders.

Areas not available for harvest, such as reserves and bypass (inoperable areas), were incorporated in the modelling. The losses due to the impacts of the new NDPEG were estimated at 10% for all FUs. Historical losses due to fire, insects and blowdown were also considered in the calculation of the AHA. No surplus areas were identified in the plan. As previously described in Section 3.3.6, future expected yields will not meet the industrial demand when wood directives are considered.

Only a small area, 11.7ha, was identified in the plan and in Tables FMP-22 and 23 for salvage. The salvage area was not counted against the AHA as natural losses are considered in SFMM.

Revenues generated from planned harvesting were shown in Table FMP-27 of the plan. It was determined that the methodology and assumptions, ratio of sawlogs etc., used to determine the revenue was correct and included the revenues associate with the salvage operation.

A Five Year Compliance Strategy was prepared and included as an appendix to the plan. The appendix also included the monitoring and assessment procedures that were to be followed when full tree harvesting on Ecosites 11 and 12 (shallow and sensitive sites) occurred. In general, the Five Year Compliance Strategy was well written, however more discussion was expected on past compliance problems and the need for initial training required to implement the new 2003-2008 FMP.

For the 2003-2008 FMP, AOCs were established to protect values and prescriptions were prepared as required. AOC prescriptions were developed in order to prevent, minimize or mitigate adverse effects of forestry operations on the value. AOCs were assigned codes either as common codes where a prescription could be applied to a similar group of AOCs or individual codes when site-specific prescriptions were needed. A comprehensive suite of AOC codes and associated prescriptions was developed for the 2003-2008 FMP.

AOC planning included all of the required documentation, including those for exceptions. Prescriptions were provided in the Supplementary Documentation. Discussion for AOC planning was detailed and included a description of site specific conditions for AOCs with individual codes. Field stop examination of prescriptions found them to be appropriate to the conditions noted in the FMP. The List of Exceptions in the FMP included exceptions to the "Management Guidelines and Recommendations for Osprey in Ontario" and "Bald Eagle Habitat Management Guidelines". A monitoring program for these AOC prescriptions was included. The monitoring program is consistent with MNR Northwest Region Interim Direction dated March 10, 2000.

3.3.8 Plan Review and Approval

The incorporation of required alterations into the 2003-2008 FMP was laborious due to significant delays in plan production associated with ongoing FRI, SFMM and operational planning revisions. MNR reviewers, although highly capable, were overwhelmed with the volume of work and agreed to provide Weyerhaeuser with alterations on an ongoing basis rather than wait to compile them in the preliminary list of required alterations. However, there was some frustration as MNR continued to submit new alterations after the preliminary list had been provided to the company.

MNR argued that the FMPM (1996) did not prohibit MNR from providing Weyerhaeuser with additional

alterations arising from ongoing review after the submission of the preliminary list provided they were ultimately included in the final list of required alterations. If this argument is accepted, MNR did not technically complete its review of the draft plan prior to public review as stipulated by the FMPM. As a result, more than 200 MNR required alterations were not subject to public review. The vast majority of these alterations simply involved corrections to maps and supplementary documentation. This resulted in non-conformance of plan review and approval requirements.

Contributing factors for failing to meet the review requirements included the late start in the planning process, under-estimating the amount of work involved with developing a FIM compliant inventory for use in the planning process, and the compressed draft plan review period in the original Terms of Reference. These factors are discussed in more detail in Section 3.3.1.

In spite of the difficult review and approval process, both MNR and Weyerhaeuser should be commended for dedication in getting the plan approved on time. Nevertheless, a suggestion is made to avoid similar production pressures and process non-conformance (see also Section 3.2.2) in the development of the next FMP.

Suggestion 10: MNR and Weyerhaeuser should develop contingency plans for staffing and support in the event of unforeseen delays in the production of the 2008-2018 FMP.

The required alterations relating to the manipulation of forest cover were certified by an RPF as required by the FMPM. Also, of the 15 designated plan reviewers, six were planning team members and nine were advisors. Considering the compressed production schedule and tight deadlines associated with draft plan review, the reviewer's working familiarity with the plan material provided continuity and most probably avoided the need for a contingency plan.

3.3.9 Plan Amendments

The master lists of amendments for both the 1998-2003 FMP and the 2003-2008 FMP were current and accurate. The full amendment records for both MNR and Weyerhaeuser were also complete. MNR met the requirement to distribute all amendments to MNR regional office, MNR Forest Management Branch and MNR Toronto.

There were 25 amendments during the term of the 1998-2003 FMP. Fifteen of these (three minor and twelve administrative) were requested during the first three years of the audit term from April 1, 2000 to March 31, 2003. These amendments were required primarily to address harvest scheduling and haul issues, changes to water crossings and tertiary road locations and changes to AOC prescriptions. Although the frequency of amendments is not excessive, many were for multiple changes and would have required a substantial review effort. The packaging of multiple changes is more efficient for overall administration and review.

For the 2003-2008 FMP, there have been eight administrative amendments to date. These occurred within the last two years of the audit term from April 1, 2003 to March 31, 2005. Most of these amendments were required to accommodate changes to water crossings and tertiary road locations. There were some inconsistencies with respect to successive plan authors certification of amendments. These have been addressed with the use of a standardized certification page for the most recent amendments.

The LCAC has indicated that they would appreciate reviewing a sample of administrative amendments in the field. This could be accomplished through participation in a field trip to visit sites for w[illegible] amendments are requested or have been appro[illegible] MNR and/or Weyerhaeuser could attend to help members understand the operational requirements for the amendments.

Suggestion 11: MNR and Weyerhaeuser should consider conducting an LCAC field trip to visit the locations of a sample of proposed amendments.

3.3.10 Contingency Plans

There were no contingency plans during the period under review.

3.3.11 Annual Work Schedules

All five AWSs were found to be complete and conformed to the requirements of the FMPM. All planned activities were consistent with the FMP. AWS Appendices included: the Fire Plan, the Annual Compliance Strategy (which did not meet

requirements – see Section 3.6.1), the Aerial Spray Plan, and a description of Tree Improvement activities. Stand lists were provided and there was also a list of water crossings to be installed and those planned to be removed.

3.4 Plan Implementation

3.4.1 Areas of Concern

A number of AOC locations were selected by the audit team to investigate activities performed on the Forest during the five-year term of the IFA. On-site observations were conducted for a representative sample of prescriptions including: water quality and fish habitat on cold and cool water fisheries; tourism values; moose aquatic feeding areas; culture and heritage sites; eagle nests; heron nests; and, no-spray buffers to protect water quality and fisheries habitat. Additional protective measures had been included in the FMP to protect the integrity of values in situations where no provincially mandated protective measures were available (aesthetics along a provincial highway and protection of a recreation trail). In the opinion of the audit team, these measures were appropriate for the specific site conditions and offered adequate protection for the values. Measurements of AOC boundaries and no-spray buffers, both in the field and from Supplemental Aerial Photography, revealed that Weyerhaeuser's methodology for accurate demarcation of AOC and cut block boundaries was good.

3.4.2 Harvest

All harvest areas viewed in the field were approved in the FMP and AWS. All harvesting followed approved SGRs and was appropriate for the sites. Amendments, as required, were made to the FMP to ensure planned harvesting was approved in the FMP.

Summary of Field Observations – Harvesting and Road Construction in General

- Utilization was excellent. There were very few merchantable pieces left and excellent efforts to completely harvest blocks. Weyerhaeuser flies the harvest areas in the spring to locate any missed bundles or piles and sends the equipment back to recover the fibre. The only bypass areas observed were too steep for operations or were sensitive sites (such as a black ash site).
- The slash management program was effective. Delimber slash was piled and burnt well. Some good efforts made on spreading and/or trenching chipper debris piles. In other isolated instances piles were not appropriately spread. Overall, there was minimal loss of productive land.
- Road location and construction techniques were good. The number of water crossings were minimized, the roads were constructed to the lowest possible standard, i.e., no over building and no excessive bulldozing.
- Good efforts are being made to reduce water "ponding" caused by roads blocking the natural drainage pattern.
- There was no evidence of garbage or fuel/oil spills seen on any site.
- Block boundaries and AOC boundaries were well laid out and were found to be very accurately mapped on Weyerhaeuser's geographic information system.

It is the audit team's opinion that Weyerhaeuser's harvesting and road construction practices are exemplary and deserve a best practice. In addition, there was evidence of good management practices at a number of field sites where the operations had returned to finish the wetter areas in the winter to prevent site damage. On areas harvested since 2003 Weyerhaeuser also provides a "Pre-work Report" which includes a map of wet areas that may be prone to rutting.

Best Practice 3: Weyerhaeuser is to be commended for the high quality of its overall harvesting and road construction practices.

Summary of Field Observations – Rutting/Site Damage

- There were two instances (see Section 3.4.2 Figures 14 and 15), and therefore limited evidence based upon regeneration success, of longer term site damage on fine textured soils through soil compaction.
- There was no evidence of longer term site damage for sandier upland sites.
- Only one incident was observed where rutting occurred due to a poor landing location (a black ash stand).

- There were no instances of unnecessary rutting due to poor skidder trail location.
- There was no evidence of excessive rutting and site damage from scarification.

While a few finely soiled harvest blocks had areas that were rutted, the overall amount of rutting was not excessive. Weyerhaeuser and MNR hold different views on the degree of site damage. The audit team believes that discussion should be undertaken to establish appropriate local standards and therefore makes the following recommendation.

Recommendation 9: In the absence of a Provincial standard for site damage, Weyerhaeuser and MNR must work together to set their own standards for the Forest based upon the long term impacts on regeneration and soil productivity.

In addition, the audit team makes the following suggestion to Weyerhaeuser in order to keep abreast of the development of the provincial guide.

Suggestion 12: Weyerhaeuser should consider participating in the 2006 review of the Provincial Guide for the Protection of the Physical Environment.

White and red pine can be found growing along the southern portion of the Forest. These species are considered to be at the most northern extent of their range. When encountered, Weyerhaeuser's normal practice is to leave these trees un-harvested because they provide valuable nesting opportunities for large raptors, refuge for bear cubs and a genetically suitable source of seed that can be utilized for natural and artificial regeneration. At one field stop it was observed that many of the white pine trees left on site had been damaged during the harvesting operation. The damage was considered severe (i.e., there were large patches of bark scrapped off the stem at or near the ground). While it was only observed at one site and because Weyerhaeuser has identified an objective in the FMP to increase the presence of red and white pine on the forest, the audit team makes the following suggestion.

Suggestion 13: Weyerhaeuser should ensure that even greater care is taken to prevent logging damage to residual red and white pine.

Summary of Field Observations – Snag Retention

Field sites showed a consistent deficiency in snag retention for pre-2003 harvest blocks that were associated with the Marten Guidelines (which required six trees per hectare) and those associated with the more recent NDPEG which came into effect with the 2003 FMP (see Figure 7). This latest guideline requires retention of at least 25 trees per hectare. Similar findings were discussed in the 2000 IFA where a recommendation was made to address the problem. Additionally, reports of compliance inspections do not document incidences of inadequate snag retention. As a result of observations made in the field, it is the audit team's opinion that the continued deficiencies in meeting the tree retention requirements (for both the Marten Guidelines and NDPEG) are the result of both MNR and Weyerhaeuser minimizing the importance of these standards. To address these problems the audit team makes the following recommendations and suggestion.

Recommendation 10: Weyerhaeuser must ensure that its Contractors and/or Overlapping Licensees leave the required number of trees on site.

Recommendation 11: MNR must enforce the requirements of the Natural Disturbance Pattern Emulation Guidelines with respect to tree retention.

Recommendation 12: Weyerhaeuser must report its success at meeting tree retention requirements in all future Forest Operations Information Program harvest reports and document their progress at meeting these requirements in subsequent Annual Reports.

Suggestion 14: Weyerhaeuser and MNR should jointly identify targets by forest unit of the tree species and sizes that should be retained to meet the requirements of the Natural Disturbance Pattern Emulation Guidelines to clarify these requirements for field staff.

Figure 7. Example of a harvest block with inadequate snag retention.

3.4.3 Renewal

Renewal operations were implemented according to plan requirements. Prescriptions were suited to site conditions. The skill and experience level of Weyerhaeuser staff and contractors met a very high standard. The results observed on the ground were exemplary and represented some of the best operations seen by members of the audit team.

There is a good mixture of forest renewal from planted, seeded and natural sources. The evidence in the field suggests that the forest renewal efforts will meet or exceed forecasted growth trajectories presented in both the 1998-2003 and 2003-2008 FMPs.

Much of the hardwood upland forest and lowland spruce forest regenerate naturally from seed, root suckers or stump sprouts. The areas prescribed for natural regeneration are consistent with the SGRs.

The majority of naturally regenerated areas are fully stocked and growing vigorously (e.g., Figure 8). On several small pockets of lowland spruce, improved rates of natural regeneration might be achieved if greater care in leaving seed trees is taken during harvest.

The areas planted with conifers are also fully stocked and growing well. MNR is concerned about the lower density planting strategies for spruce that were recently introduced by Weyerhaeuser. MNR's concern is that this practice is not consistent with the FMP and that density targets at FTG will not be achieved. Hence, forecasted growth targets will not be achieved and operations are not consistent with the FMP.

Weyerhaeuser is concerned about reducing costs to be competitive and that densities on many sites will be too high due to natural ingress of seedlings from seed left on the site following harvest. These sites

will require spacing treatments. Hence, finding ways to reduce establishment costs and densities is a priority. Staff contend the operations are consistent with the FMP.

The audit team concludes that the silviculture operations within the audit period are consistent with the FMP. The lower density and lower cost establishment strategies are consistent with the SGRs and FMP. This finding is based upon all the evidence considered from site inspections, interviews and document review (see Figures 9 and 10).

Figure 8. Free-to-Grow hardwood forest at five years old in the foreground compares well with the mature hardwood forest seen on the hills in background.

Figure 9. The left panel shows low density spruce planting on conifer mixedwood (BLK W1998) and the right panel shows full density planting on competitive sites (BLK W1998 552).

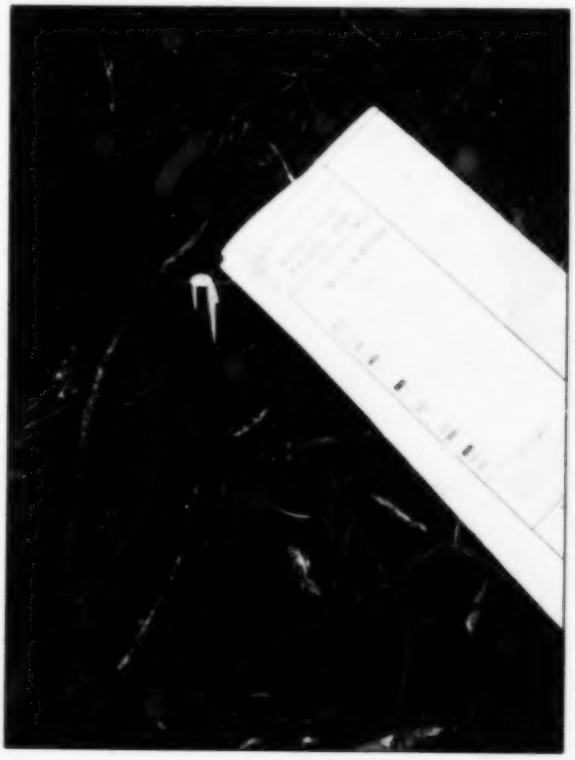


Figure 10. Many sites (e.g., BLK W121) have abundant ingress of jack pine and spruce seedlings.

Some LCAC members expressed concern that white spruce and white pine representation was declining on the landscape. This issue is being addressed by under-planting and mixed planting of these species on appropriate sites (see Figure 11).

Many sites are successfully regenerated by aerial seeding. Several mixedwood forests on fresh soils with a component of pine were also aerial seeded, a practice that is not recommended in the provincial silviculture guidelines (e.g., Figure 12, left photo BLK W1998-868). This treatment is successful, consistent with the SGRs, and is supported by a monitoring program as required when exceptions to the guides are applied in the field. Better stocking might be achieved by increasing mineral soil exposure with modified site preparation patterns. The site shown on the right in Figure 12 is a coarse soil that was aerial seeded. This is consistent with the guides and achieves excellent results (BLK 1998-1095).

Figure 11. Red and white pine seedlings are being planted to ensure these species are represented in the future forest (BLK W76 and BLK W1998-869).

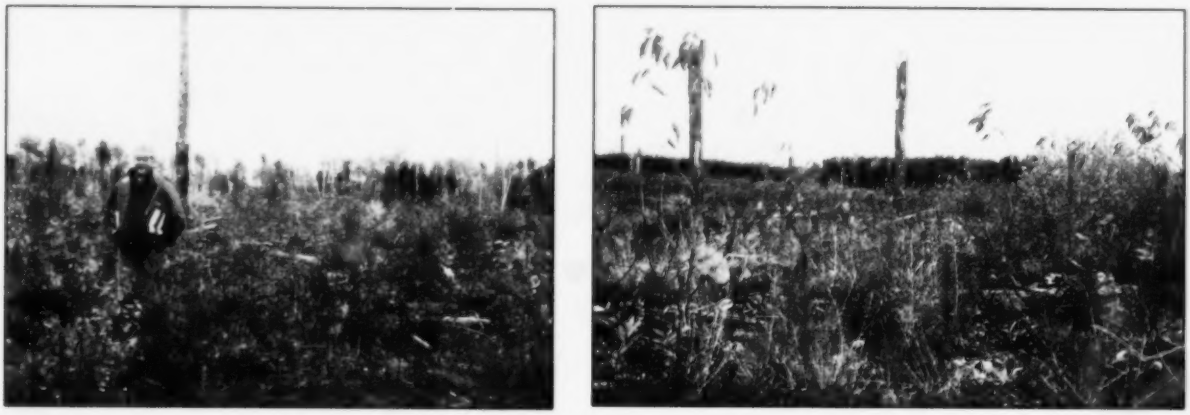


Figure 12. Aerial seeding of jack pine (fresh site mixedwoods on left, coarse soil on right).

Site preparation coverage on each site was appropriate for the prescribed treatments. Since 2002 all site preparation machines record the area treated using the global positioning system, providing precise operational maps for planting and tending. The seedling stock on all sites appeared healthy and properly planted, benefiting from the conditions created from the site preparation treatments.

Enhanced training of site preparation operators to recognize natural regeneration opportunities associated with aspen stumps and residual trees can further improve operations. For example, in Figure 13 (BLK W1998-373) a portion was site prepared and planted (left side of Figure 13). The remainder was left for natural regeneration following the Forest Operations Prescriptions and site plan. A larger buffer around residual aspen would be more consistent with the renewal objectives for the site.

Figure 13. Site preparation along the boundary of two FUs could further take advantage of natural regeneration by avoiding areas where aspen stumps and residual stems are encountered.

The only aspect of Weyerhaeuser's forest renewal program of concern to the audit team was found on fine textured soils which are very limited and isolated in area on the Forest. The seedling on the left side of Figure 14 is chlorotic and growing slowly on a compacted fine-textured-soil site (BLK W1998-342). These seedlings will eventually recover their growth rate over time; however, compaction can be avoided by ensuring harvests occur when the site is either dry or frozen. For example, the seedling on the right side of Figure 14 is also on fine textured soils but is growing well (BLK W1998-532). This site was winter logged and hence avoided compaction problems.

The fine texture soil in Block W1998-242 shown in Figure 15 is highly competitive and possibly compacted. Poor survival and growth has lead to unsatisfactory stocking levels. Direct planting or mounding followed by planting may help rehabilitate the site and bring it back to full productivity. Only two of the 32 sites examined by the audit team had forest renewal problems. Both of these sites had fine textured soils.

Figure 14. Seedling growth on compacted versus non-compacted sites.

Figure 15. Fine textured soil site with poor forest regeneration.

The audit team advocates even further refinements to the excellent work being done in renewing the Forest and makes the following comprehensive suggestion.

Suggestion 15: Weyerhaeuser should:

- Reduce the potential for compaction on fine textured soils even further.
- Consider site rehabilitation of areas that are compacted (e.g., mounding and planting).
- Increase mineral soil exposure on fine textured soils scheduled for seeding.
- Maintain or increase planting density on clay and silt soils associated with lacustrine, moraine and outwash plain landforms and on other sites where competing vegetation problems are anticipated.
- Ensure seed sources and advanced growth is even better protected on lowland sites.
- Enhance the training of site preparation operators to recognize natural regeneration opportunities associated with aspen stumps and residual trees.

3.4.4 Tending and Protection

Stands that have more than 8,000 stems per hectare and exceed three metres in height are selected for spacing. Table FMP-25 forecasts 2,700ha of spacing over the five year term of 2003-2008. Currently, actual spacing achievements are approximately 400ha annually which total 2,000ha over the five year term. In this light and the fact that the SGRs show density targets of 1,500 to 3,500 stems per hectare, the spacing program will likely require expansion to meet the FMP objectives and SFMM forest condition forecasts.

Recommendation 13: The spacing program must be carefully reviewed during the preparation of the 2008-2018 FMP to ensure an adequate amount of area is being treated to meet the plan objectives.

Tending most often consisted of aerial applications of herbicides. The treatments met regulatory requirements and were consistent with the plan. The area tended was judiciously selected in that some areas are not tended although some competing vegetation exists. The desired species are expected to overcome the competition naturally or through pre-commercial spacing projects. These exceptions appear reasonable based upon the field inspections made by the audit team.

Figure 16 shows a mixedwood site that was planted to jack pine and could benefit from tending (W1998 1136). Banding treatments by varying spray swath widths is an approach worth considering.

Figure 16. Mixedwood site planted to jack pine.

Free-to-Grow

Weyerhaeuser met its survey targets for FTG stands. The FRI has been properly updated. The rates of renewal are consistent with planned levels.

The FTG stands were verified in the field and the audit team's observations matched those reported by Weyerhaeuser staff. The height and stocking measurements were conservative and this trait was further verified by interviewing MNR staff.

The high quality and timeliness of the FTG survey work done by Weyerhaeuser in cooperation with MNR provides assurance that the Forest is being managed in a sustainable manner. The audit team considered the characteristics of the existing mature forest surrounding each renewal project. The young forest that is developing from the areas declared as FTG is expected to have similar, if not better, qualities compared to the current forest condition (see photos in Figure 17).

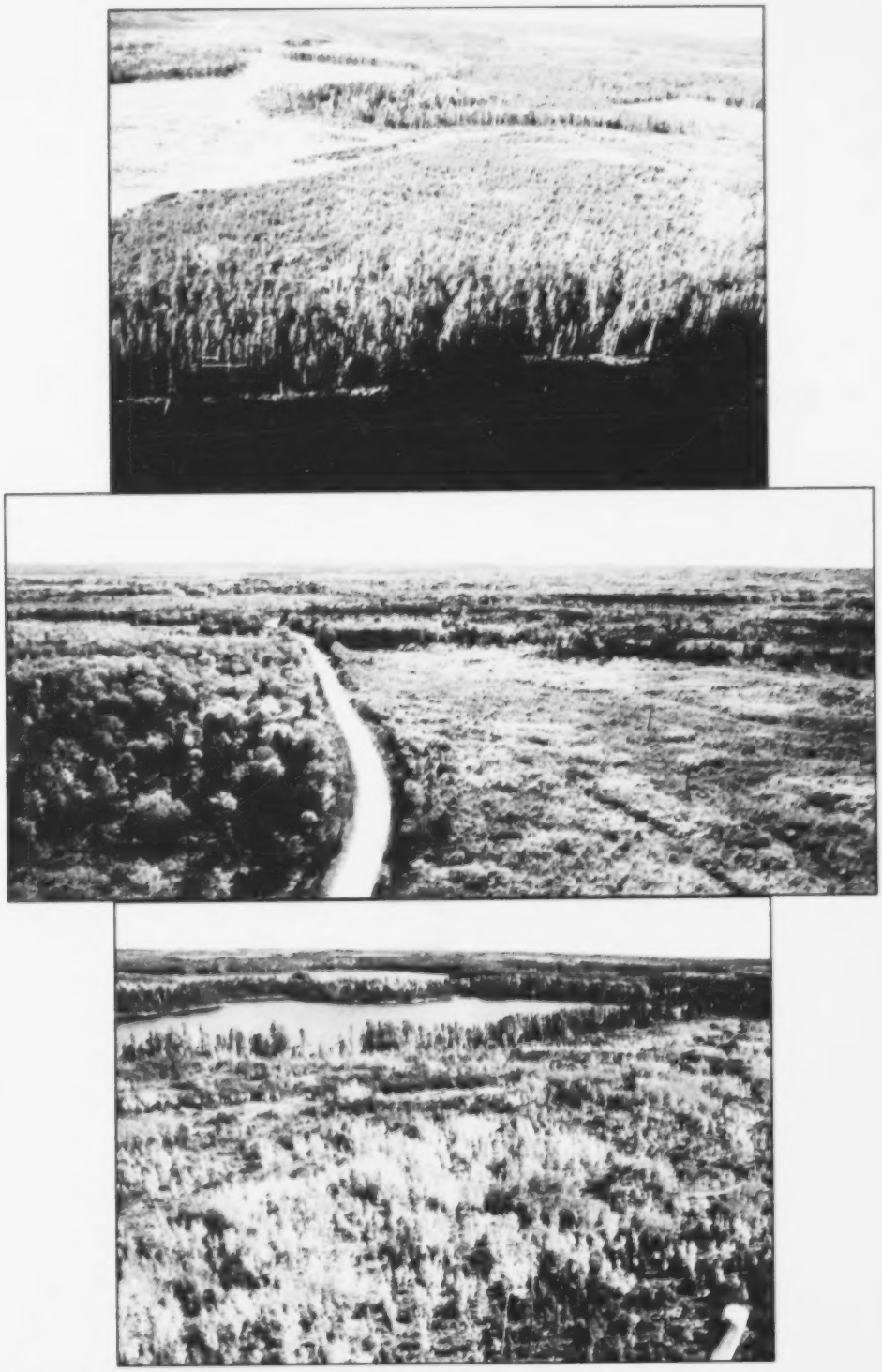


Figure 17. Free-to-Grow areas compared to current forest conditions.

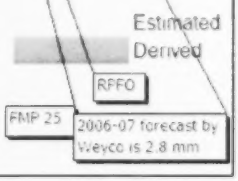
3.4.5 Renewal Support

MNR's concern about lower density planting strategies for spruce was also expressed as a concern over seedling orders that appeared to be below planned levels. The audit team concludes that seedling orders for the future are reasonable when current density strategies are accounted for (Table 2).

Will the five-year average of planted area in 2003-2008 deviate significantly from the plan (i.e., Table FMP-25)? If areas initially scheduled for planting are replaced with aerial seeding, the ratios in FMP-25 might not be met for the area planted. However, seeded sites that are spaced have the same growth projection used for planting (Intensive 1 yield curve in the approved FMP). In the audit team's view the plan objectives will be met even with increased aerial seeding and reduced planting.

Table 2. Seedling forecasts made by the audit team agree with those submitted by Weyerhaeuser.

	AHA	Planned	Actual	Actual %	Planted	Plant %	Trees (mm)	Trees ha
1998 to 2003	7432	6783	5028	74%	2917	58%	4.3	1474
2003 to 2008	6496	6408	5675	89%	2923	52%	4.3	1474
Low Density (sb)	6496	6408	5675	89%	2923	52%	3.5	1200
Low Density + Seed	6496	6408	5675	89%	2339	41%	2.8	1200



In addition to examining the seedling orders, the audit team examined invoices and Science and Research Experimental Development tax credit applications as evidence supporting the seed collection, seedling purchases and tree improvement work. Half of the planted seedlings are derived from seed from seed orchards and family tests managed through a tree improvement cooperative. Planted seedlings observed in the field that were grown by several different suppliers across Canada, showed excellent growth.

As more improved seed becomes available, chain of custody and reliable estimates of genetic gain become important issues to consider. Interviews with Weyerhaeuser staff and a representative from the regional Tree Improvement Cooperative echoed these concerns. Corporate MNR is in the midst of developing a provincial silviculture strategy that should consider these emerging issues.

Suggestion 16: Corporate MNR should consider developing procedures for chain of custody, and reliable estimates of genetic gain for improved seed as a component of a Provincial silviculture strategy.

3.4.6 Access

Access planning for primary and secondary roads was comprehensive and met the requirements of the FMPM. The FMP noted that access on the Forest was well developed with several provincial highways and a network of forest roads.

Road construction was appropriate for the intended use of the road. Numerous instances were found where tertiary roads had not been physically abandoned with no apparent reason for their retention. Such roads will likely remain un-forested if left without a treatment to return them to productive forest land. Although it is recognized that the recreational use of tertiary roads will decrease the likelihood of complete forest renewal on many tertiary roads, the audit team feels that much of the area covered by tertiary roads can be effectively regenerated with renewal treatments. To ensure improved reforestation of tertiary roads the audit team provides the following recommendation.

Recommendation 14: Weyerhaeuser must regenerate tertiary roads that will not be used in the future.

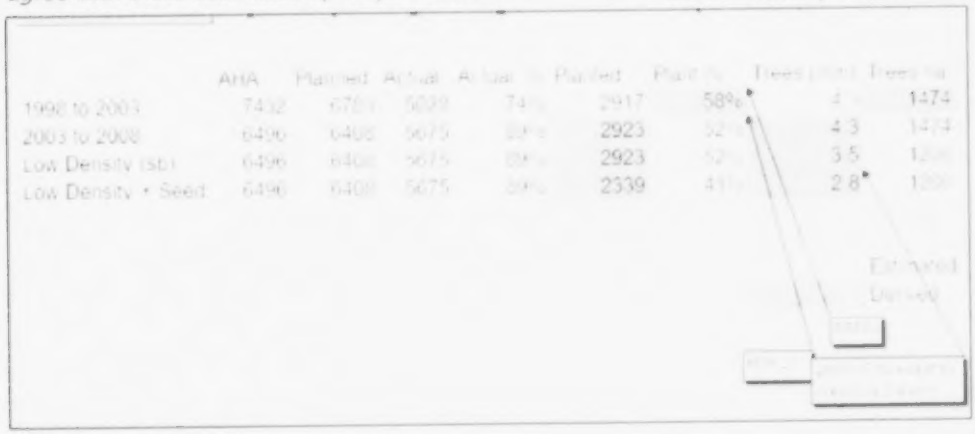
The 2000 IFA issued four recommendations respecting water crossings. Crossings examined during this audit demonstrated that crossing installation has improved with many excellent

3.4.5 Renewal Support

MNR's concern about lower density planting strategies for spruce was also expressed as a concern over seedling orders that appeared to be below planned levels. The audit team concludes that seedling orders for the future are reasonable when current density strategies are accounted for (Table 2).

Will the five-year average of planted area in 2003-2008 deviate significantly from the plan (i.e., Table FMP-25)? If areas initially scheduled for planting are replaced with aerial seeding, the ratios in FMP-25 might not be met for the area planted. However, seeded sites that are spaced have the same growth projection used for planting (Intensive 1 yield curve in the approved FMP). In the audit team's view the plan objectives will be met even with increased aerial seeding and reduced planting.

Table 2. Seedling forecasts made by the audit team agree with those submitted by Weyerhaeuser.



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The 2000 IFA issued four recommendations respecting water crossings. Crossings examined during this audit demonstrated that crossing installation has improved with many excellent

crossing installations viewed. In many instances of culvert installation, culvert lengths were found to be longer than required thereby affording additional room for stabilization of the road with rip-rap (as seen in Figure 18).

Figure 18. Example of culverts that are longer than required, affording good slope stabilization with rip-rap material.

The 2000 IFA was also concerned with older water crossings. Although Weyerhaeuser and MNR have dealt with the issue, problems were still found. The audit team viewed a wash out at an older crossing, and significant erosion and sedimentation into a stream bed. Some of these older crossings pose a high safety risk as severe storms or large spring runoffs may produce serious consequences for safe travel and local resource values. Since these findings are consistent with concerns raised during interviews about the same topic, the audit team believes that follow-up is required and provides the following recommendation. It is noteworthy that Weyerhaeuser staff, when interviewed, indicated that staff are actively engaged immediately after severe rain storms in an attempt to find and resolve problems as soon as possible.

Recommendation 15: MNR and Weyerhaeuser must continue efforts under the Forest Roads and Water Crossings Initiative to repair or remove high risk water crossings on the Forest.

Accumulations of chipper debris often pose a difficult problem during and after forest operations. Piles of debris are unsightly and present a potential fire hazard. Conversely, spreading this debris can cause a further small loss of productive forest land due to the difficulty of forest renewal among the debris. The 2000 IFA recommended that Weyerhaeuser deal with this problem. At field sites, the audit team saw that this problem has not been totally resolved, although Weyerhaeuser has made attempts. As mentioned in Section 3.4.2, this is an isolated concern and has resulted in a minimal loss of productive land.

Difficulties in dealing with the chipper debris issue were acknowledged by Weyerhaeuser and MNR staff. Site preparation and tree planting treatments of varying success rates were seen in the debris. The audit team concludes that, in general, renewal success is related to the original location of the chipper pad (see Figure 19). Where chipper pads had been located on poorly drained sites, renewal treatments were unsuccessful and where chipper pads had been located on well-drained sites, renewal success was seen. The audit team encourages continued efforts by both Weyerhaeuser and MNR and makes the following suggestion with respect to harvest block planning.

Suggestion 17: Where it is possible and reasonable, Weyerhaeuser should plan road location and harvest operations to have in-bush chippers located on well-drained sites during operations.

Figure 19. Successful pine renewal in chipper debris on a well-drained site. Site preparation was performed using an excavator.

Several aggregate pits were examined during the field visit portion of the audit. Numerous instances of non-compliance to standards for aggregate pits were encountered including: topsoil not stock piled; no five metre leave strip to the tree line; extraction within 15 metres of the site permit boundary; safety concerns including excavation faces that were too high and were undercut; a roadway on top of an undercut excavation face; and garbage was seen in a pit where a gate had been approved, but not installed.

Non-compliances fall into two separate categories, one dealing with worker and public safety and the other dealing with administrative concerns. The audit team feels that priority should be given to the safety concerns and recommends immediate action with conclusion by June 30, 2006. Administrative concerns can be addressed over a longer time period. The following recommendation is therefore provided to deal with these concerns.

Recommendation 16: Weyerhaeuser must ensure that all aggregate pits meet safety related standards of the Aggregate Resources Act by June 30, 2006 and meet all other requirements by October 31, 2006. Factors that must be addressed include the following:

- no undercutting of the working face
- the working face shall be sloped at the required angle of repose
- the vertical height of the working face shall not be more than 1.5 metres above the maximum reach of the equipment
- all pit faces must be sloped to the angle of repose when the site is inactive
- all trees within 5 metres of the excavation face must be removed.

3.5 System Support

3.5.1 Human Resources

Proper communication, awareness of duties and responsibilities, and training of staff, employees and contractors is necessary in order to successfully manage the forest. The audit team has assessed these aspects after reviewing procedures and records, and interviewing and observing MNR and Weyerhaeuser staff.

The audit team finds that good internal communication is evident within both MNR and Weyerhaeuser operations. They have sufficient access to training opportunities that are relevant to their current roles and personal career development goals. These career development goals are communicated to management and periodically reviewed, including a peer review every two years for Weyerhaeuser staff.

Through its EMS, Weyerhaeuser has a good training matrix for staff and contractors that identifies the training necessary to perform the duties of all positions within the operation. Furthermore, training attendance is recorded in a database (INTRAC) for employees and contractor representatives. Currently, Weyerhaeuser provides training to the contractor or the contractor's representative who in turn is responsible for providing training to the contractor's employees. Judging by the concern raised in the area of wildlife tree retention, the audit team believes that Weyerhaeuser should consider delivering more extensive training programs with all contractor employees for high priority environmental issues (see Section 3.4.2 – Harvest/Snag Retention).

Complete MNR staff training records reside with individual staff, as opposed to having a central database that is easily accessed by management or human resources staff. However, attendance for certain mandatory training courses is recorded by the person or organization delivering the training. Some examples include the FMP training modules provided by regional and provincial MNR staff. MNR should consider a central database or set of records similar to the Dryden Forest team, that can be easily accessed by management.

One member of the public was concerned that MNR and Weyerhaeuser had insufficient staff to manage the Forest. The audit team finds the local experience of Weyerhaeuser and MNR staff to be extremely valuable for the sustainable and effective management of the Forest, and encourage its managers to maintain this level of experience and expertise. This directly relates to the Best Practices found in Sections 3.1 Commitment and 3.4.2 Harvest.

3.5.2 Documentation and Quality Control

Many examples of extensive documentation and good document control were observed by the audit team in both MNR and Weyerhaeuser operations. This included documents and records such as those relating to FMPs, amendments and public consultation. However, the MNR training record system could be improved by storing training data in a central database.

Also, the audit team experienced the difficulty in extracting silviculture data from Ontario Forest Information System (OFIS, Weyerhaeuser's silviculture software). The data is collected and stored properly, but data management and retrieval is a problem. For example, earlier records were stored on a project basis. These projects included a number of separate blocks that were difficult to separate from one another, as evidenced during the site selection process. While techniques are being implemented to address this issue, it could result in on-going planning delays or inaccuracies in historical implementation records if not resolved.

Suggestion 18: Weyerhaeuser should continue to improve its data management and retrieval system prior to developing the next plan.

3.6 Monitoring

3.6.1 General Monitoring

Silviculture Monitoring

In the fourth year following the treatment, Weyerhaeuser uses a systematic grid of circular plots to assess regeneration and ensure it meets standards. The survey is conducted late enough to account for ingress, yet early enough to detect and correct problems from low stocking. Given the concerns expressed by MNR on density, the survey is a critical instrument of adaptive management and was carefully reviewed by the audit team.

The survey is deemed suitable for its intended purpose, with one exception. The stocking plot dimension was recently increased to $10m^2$. Unless Weyerhaeuser can provide justification to MNR for this increase in plot size, it should be reduced to $4m^2$ to better report on regeneration standards based upon an assumption of 2,500 evenly spaced stems per hectare defining full stocking. Therefore, the audit team recommends the following.

Recommendation 17: Weyerhaeuser must seek expert advice and peer review of the plot dimensions used in its survey by June 30, 2006.

Compliance Monitoring

Compliance monitoring of forestry activities is a joint responsibility of the forest industry and MNR. Both the SFL holder and MNR are responsible to prepare compliance plans to ensure that each party commits to its responsibility of monitoring compliance and to make certain that forestry operations adhere to the specified requirements. Forest industry performs the primarily role by conducting compliance inspections, identifying and reporting to the MNR instances of compliance and non-compliance, and performing corrective actions and specifying preventative measures for improvement. This usually requires the SFL to conduct annual training sessions. MNR's role includes conducting audits and spot-checks, verifying industry reports, and assisting with any of the required compliance training offered by the SFL.

The compliance role of the MNR was initially outlined in the "Dryden District 5 Year Compliance Strategy – 1998 to 2003". No strategy has been finalized since that time, although work on a draft version had apparently been undertaken. This document and the Annual Compliance Plans are significant components of the joint effort required to ensure compliance. The five-year strategy must be completed with a comprehensive description of MNR's efforts to ensure that its obligations are met. MNR's annual plans must take into account Weyerhaeuser's plans and reflect its responsibility to conduct audits and spot checks and establish monitoring priorities.

Recommendation 18: MNR must complete its five-year District Compliance Strategy which must include a strategy to conduct audits and spot checks and verify industry non-compliance reports with regard to Weyerhaeuser's Annual Compliance Plan.

Weyerhaeuser's 2003 Five Year Compliance Strategy met the planning requirements and contained a good discussion on objectives and strategies that it planned to employ to ensure compliance and continuous improvement for all its operations. The required "exceptions monitoring program" for full tree harvesting on sensitive (Ecosites 11 and 12) sites was identified as required.

While five Trespasses and one Repair Order have been issued over the audit term, this record is considered typical by the audit team for this size of operation. Most of the incidences were considered minor because they did not have a negative impact on a value and involved working outside of the approved area (rather than incorrectly locating or crossing a boundary or AOC). The audit team does not view this frequency or type of infraction as significant.

With respect to charges laid against Weyerhaeuser by other government agencies, the Department of Fisheries and Oceans has laid one charge for a crossing that washed out in 2002 on the Snake Bay Road. Weyerhaeuser is contesting this charge in court because the washout occurred after a major storm on a road that had not been used by the Company since 1983. This same storm system also washed out numerous other roads in the District including major highways and railway crossings.

None of the Annual Compliance Plans during the audit period were prepared in accordance with the compliance planning requirements. The Annual Compliance Plans lacked a schedule of operations, they did not identify annual training requirements, and did not discuss issues/non-compliances arising from the previous year's inspections. However, they were all approved by MNR as part of the AWS.

In discussions with Weyerhaeuser regarding the deficiencies of the Annual Compliance Plans, Weyerhaeuser stated that they feel these plans are redundant and serve no purpose because the same information can be found elsewhere in the Five Year Compliance Plan and AWS. While the audit team

agrees that there is duplication in the system, Weyerhaeuser did not provide any evidence to show that they identified the problem to MNR prior to the audit. As a result of the Annual Compliance Plan not meeting MNR requirements, and in the recognition of the duplication of the planning requirements, the audit team makes the following two recommendations.

Recommendation 19: Weyerhaeuser must ensure that future Annual Compliance Plans meet the requirements set out in the Guidelines for Forest Industry Compliance Planning and MNR must ensure that these requirements are met before approving the plans.

Recommendation 20: Corporate MNR must re-examine the requirements of Annual Compliance Plans to ensure that the information is not redundant with Five Year Compliance Plan and AWS requirements.

With respect to training, MNR identified that they are not involved with the annual compliance and certification training that Weyerhaeuser conducts with their Contractors and Overlapping Licensees. This practice of excluding MNR is unfortunate. The audit team feels that these training sessions are an excellent opportunity to ensure everyone has an equal understanding and appreciation of the compliance requirements, and makes the following suggestion.

Suggestion 19: Weyerhaeuser should invite MNR Compliance Staff to its Annual EMS Awareness Training and its Biannual Operating Standards and Compliance Meetings.

Compliance Inspection Reporting

Compliance inspections are conducted by Weyerhaeuser and Contractor supervisors on a regular basis. The information is relayed to Weyerhaeuser Woodlands staff who then complete the required Forest Operations Inspection Reports for submission to MNR. Most of the reports filed by Weyerhaeuser were found to be of poor quality and did not meet Provincial Reporting Standards.

For example, the reports lacked an explanation of why something was found to be "in-compliance". Also, many reports documented "in-compliance with comments" when steep hills were not harvested. These instances are not a wasteful practice and should have been reported as "in-compliance". In situations where there was wood left to be picked up or where water movement was being impeded, the harvested block was being reported as completed and these concerns were tracked by Weyerhaeuser and provided to the MNR in a separate database, rather than using the tracking system available in the FOIP program.

These reporting problems relate to an earlier decision made by Weyerhaeuser not to pursue compliance inspector certification. Instead, Weyerhaeuser chose to implement an EMS that made each worker responsible for their own compliance. According to Weyerhaeuser this responsibility begins with the operator and flows upward through operational supervisors, contractors and Weyerhaeuser staff at all levels. The problem with this system is that it does not conform with MNR's Compliance Policies and reporting requirements and staff may be unaware of the requirements and specifications of the Provincial system.

While the audit team recognizes that the requirement for certified inspectors did not take effect until July 2005 (which is outside the audit period), it is recognized that Weyerhaeuser was aware of this upcoming requirement and could have avoided many of the inadequacies associated with the compliance inspection reports if more staff and contractors were certified earlier. As a result, the audit team makes the following recommendation.

Recommendation 21: Weyerhaeuser must ensure that only certified compliance inspectors are used for field verification and reporting and that all observations from the compliance inspections are correctly reported with additional-tasks-to-be-undertaken tracked in the FOIP reports.

Within the five-year period of the audit the number of compliance inspections performed by both Weyerhaeuser and MNR is considered higher than average compared to other management units. Table 3 summarizes the approved ARs from 2000/01 to 2003/04 and the submitted (but not yet approved

by MNR) AR for 2004/05. Discrepancies between MNR's in-compliance ratio and a licensee's in-compliance ratio are often encountered due to the fact that MNR performs inspections to verify the licensee's report of non-conformance. In the case of the Wabigoon Forest, further reconciliation of the difference between MNR's "in-compliance" rating and that reported by Weyerhaeuser should be accomplished by implementing Recommendation 21 – to have Weyerhaeuser inspectors certified, and by Suggestion 19 – to invite MNR to Weyerhaeuser's training sessions.

Table 3. Number of inspections and in-compliance percentages by party over the five-year period of the IFA.*

	Weyerhaeuser Inspections	MNR Inspections	Weyerhaeuser in Compliance (%)	MNR in Compliance (%)
Access	269	38	99	55
Harvest	889	233	99	86
Renewal	330	13	99	85
Maintenance	40	1	100	100
Total	1528	285	99	82

* Includes unapproved figures from the 2004/05 ARs.

It was brought to the attention of the audit team that several letters from MNR concerning compliance issues were not acknowledged in writing by Weyerhaeuser. Whether or not Weyerhaeuser took the appropriate actions in the field, it is always considered a good practice to respond in writing to concerns raised in writing. If not, the Company leaves itself vulnerable to MNR taking more serious formal steps.

Suggestion 20: Weyerhaeuser should respond in writing to letters from MNR which identify concerns about compliance issues.

3.6.2 Annual Reports

The audit team examined the ARs prepared by Weyerhaeuser which covered the first four years of the audit term. The 2004/05 AR was not due until November 15, 2005. The ARs included MNR's component associated with the District's Term and Condition 77 and Condition 34 annual reporting requirements. These submissions covered the English River, Dryden, Wabigoon, and in some cases the Brightsand Forests. The submission dates corresponded to FMPM requirements.

AR submissions did not meet the FMPM requirements for reporting on monitoring of AOC prescriptions that are exceptions to manuals or guidelines. In some cases, monitoring of these exceptions was explained, albeit peripherally, by discussing the monitoring procedure. However, no results were provided. In other ARs there is no reference to monitoring of AOC prescriptions that are exceptions. In the opinion of the audit team, results of monitoring should be part of the public record.

Recommendation 22: Weyerhaeuser must include a description and results of the monitoring procedure for AOC prescriptions that are exceptions in the ARs.

The ARs have the required text regarding the listed exceptions to the silviculture guides. They describe the cooperative monitoring program for full tree harvesting on shallow sites. All reports up to the 2002/03 AR state that no operations occurred that were exceptions to the guides. The first instance of operations that were exceptions to the guides was reported in the 2003/04 AR. The report notes that the survey results will be reported when they become available four years after treatment. The auditee provided preliminary summary statistics that were being compiled at the time of the audit.

The audit site visit included sites treated prior to 2003/04 that were exceptions to the guides (e.g. BLK 1998-868). It appears that although the required sections of the ARs were completed, they were not accurate. However, these inaccuracies are not material enough to warrant a recommendation in that meaningful results will not be available until such time as the fourth year surveys are completed and analyzed. The FMPM requires a report on effectiveness of exceptions to the guides, not an accurate description of areas treated that are exceptions to the guides.

3.6.3 Report of Past Forest Operations

The audit team did not review the 1993-1998 RPFO. The RPFOs for the 1988-1993 and the 1993-1998

periods were reviewed by the previous IFA auditor[10]. Page 26 of AuditFor's 1995-2000 Report states that, "both reports were completed as required and accompanied with clear analytical text."

The audit team did review the draft 1998-2003 RPFO which was submitted on July 8, 2005. The audit team presents the following review of the draft for information purposes only.

The draft RPFO contained well written sections on tree improvement, compliance monitoring, and exceptions monitoring. Other sections did not meet the requirements of the FMPM (1996). Statements regarding planned versus actual results were generally adequate, however explanations for deviations provided little insight or were lacking. For example, there was no discussion of yield with respect to harvest area and volume and no explanation for the transfer of large areas between regular and contingency harvest. Discussions of bypass and salvage were also lacking, but the text did discuss the current trend toward a concentration of operations in the jack pine FUs and the potential long-term impacts on traditional harvest operating conditions.

With respect to renewal, tending and protection, there was adequate discussion of the differences between planned and actual levels of tree planting and seeding, however there was no discussion of natural regeneration and site preparation and no comparison of planned versus actual tending levels. Similarly, there was no discussion of FTG survey levels in relation to harvest levels while discussions of harvest and regeneration success were absent. Also, there was no discussion of access issues even though there were several access-related amendments. The rationale provided for the four minor amendments was clear, but discussion of the reasons for the 21 administrative amendments failed to provide any insight into the nature of the improvements or the types of information that necessitated amendment requests.

There were also discrepancies in the various RPFO tables. For example, 440 ha of bypass were not included in the RPFO-2 sum of harvest and bypass. There were differences between FU total harvest and depletion areas in Table RPFO-1 compared with totals obtained from the associated AR Tables. Discrepancies were also noted between Table RPFO-1, RPFO-2 and AR-1 totals.

Conclusions, though limited in scope, were generally valid. However, the RPFO failed to draw conclusions for all of the requisite subject areas. Also missing were the review of assumptions and comparison of the socio-economic profile at the beginning of the term with the updated profile at the end of the term. The discussion of the achievement of management objectives, although informative, failed to address each objective and its associated management strategies individually and all objectives collectively as a group. The required summary statement of silvicultural effectiveness by FU, working group and silvicultural treatment package was entirely lacking.

Generally speaking, the RPFO summary failed to portray the full extent and character of operations on the Forest. The summary highlighted some conclusions, but failed to mention others and made conclusions that were not stated in the text. For example, the summary draws a conclusion regarding the overachievement of FTG survey results although this is not mentioned in the related section of the text. Finally, the summary failed to mention the results of the 2000 IFA and even stated that, "no audits were conducted on the Wabigoon Forest during the 1998-2003 term".

3.7 Achievement of Management Objectives and Forest Sustainability

3.7.1 Achievement of Management Objectives

The audit team examined the following documents to assess how well both FMPs met the approved management objectives:

- The 1998-2003 FMP
- The 2003-2008 FMP
- The Comparison and Trend Analysis of Planned versus Actual Forest Operations
- ARs

The audit team reviewed these documents and through interviews evaluated the level of achievement and the rationale for significant

[10] AuditFor Inc. 2000. 1995-2000 Independent Forest Audit Report – Wabigoon Forest SFL 541935. September 29, 2005. Queen's Printer for Ontario.

variances between planned and actual results. Table 4 shows the audit team's assessment of both FMPs.

Usually in this examination, the audit team uses the RPFO as another source for assessment. However, as stated in Section 3.6.3, the audit team did not review the 1993-1998 RPFO. Thus, there was no material examination of this RPFO since the previous IFA reviewed it, concluded that it met requirements, and also came to the appropriate conclusions.

There were a complex set of 27 objectives with a common base over the two, five year periods that the plans covered. They consisted of a mix of quantifiable and qualitative statements of objectives for forest diversity, socio-economics, cover for non-timber values and silviculture, which were then coupled with targets and strategies respectively. There was evidence of overlap and duplication among the objectives and for this reason the team makes the following suggestion.

Suggestion 21: Weyerhaeuser should carefully consider the development of the 2008-2018 FMP's objectives and targets with respect to clarity, overlap, ease of monitoring and evaluation of success.

Table 4. The audit team's assessment of the achievement of the 1998-2003 and 2003-2008 Forest Management Plans' objectives.

Audit Team Assessment of Degree of Achievement – 1998-2003 Wabigoon Forest FMP Objectives.		
Objective	**Target**	**Achievement**
A. Forest Diversity		
- strive to keep forest diversity indices within natural variation	- maintain heterogeneity	Met
- ensure Pr and Pw ecosystems, including old growth, are present while permitting sustainable harvest levels	- maintain FUs - attempt 10% of FUs at +121 - protect 1 Pr and Pw ecosystem in each site district - ensure Pr and Pw are represented	Met
B. Social and Economic Matters		
- provide a sustainable, efficient and economical supply of timber and to promote optimal utilization of products	5 year targets in millions Conifer[11] 3.2m^3 Hardwood[12] 0.7m^3 Hardwood[13] 0.3m^3 Landbase[14] 0.7ha Production[15] 0.46ha Comm. Thin. 0.005ha FRI Re-inventory	Met
- incidental products available	- personal use harvest areas	Met

[11] To Avenor Inc., now Weyerhaeuser, in Dryden.
[12] To Avenor Inc., now Weyerhaeuser, in Dryden.
[13] To Tolko Industries in Jaffray Melick.
[14] Total area in the managed category.
[15] Managed Crown forest available for timber production.

Table 4 Continued

Audit Team Assessment of Degree of Achievement – 1998-2003 Wabigoon Forest FMP Objectives.		
Objective	**Target**	**Achievement**
C. Provision of Forest Cover		
- maintain forest landscape for featured wildlife species habitat	- no less than 15% marten habitat - maintain or increase moose forage - maintain or increase moose winter habitat - maintain or increase bald eagle, osprey and great blue heron habitat - maintain or increase woodpecker habitat - maintain or increase spruce grouse habitat - maintain or increase great grey owl habitat	Met, except for wildlife tree retention
- maintain remoteness of Resource Based Tourism	- meet all conditions of agreements	Met
- maintain or enhance non-timber harvest opportunities	- maintain or enhance levels for baitfish, etc...	Met
- to provide road access to harvest areas for recreation	- maintain current opportunities for road based recreation	Met
D. Silviculture		
- maintain forest productivity through sound environmental practices and maintenance of ecological diversity	- maintain the timber production area of 460,000ha	Met
- increase productivity through silvicultural practices	- to actively convert Bf to other FUs to increase productivity - to increase yield through the application of intensive silviculture	Met, with some concern for fine textured soils

Table 4 Continued

Audit Team Assessment of Degree of Achievement – 2003-2008 Wabigoon Forest FMP Objectives (April 1, 2003 to March 31, 2005).		
Objective	**Targets**	**Achievement**
A. Forest Diversity		
- maintain or move towards a natural range	- SFMM benchmark +100yr - maintain 3% in old growth - maintain occurrence of rare or old at 2003 levels - maintain 3% of working group in old growth conditions at 2003 levels (short term)	On target
- maintain tree species diversity in site region 4S	- maintain each FU +/- 20% by site region - maintain rare tree working groups (ha's given)	On target
- increase Pr and Pw ecosystems	- increase Pw dominated forest - increase Pr dominated forest	Pr on target, but Pw not able to be assessed
- use silvicultural practices to emulate natural disturbance and landscape of site region 4S	- move towards site region 4S landscape template - forest to retain residual patterns	On target
- to maintain the productivity of soils	- protect all sensitive sites (ES 11 and 12) through best practices	Some fine textured and shallow soils show limited evidence of temporary losses of soil productivity
- to maintain forest habitat	- maintain habitat for Northwest Region selected wildlife species	On target
- maintain water quality and protect fisheries habitat	- maintain disturbed secondary watershed area <50% - protect all known fisheries values by maintaining reserves	On target
B. Social and Economic Matters		
- to provide a sustained wood supply	787,000m^3/yr SPF 254,000m^3/yr Po 35,000m^3/yr Bw	On target
- make available incidental volumes for personal or small scale commercial use	- accommodate requests - attempt to provide for personal use	On target
- work with local Aboriginal peoples	- develop and maintain communications - facilitate opportunities	On target
- respect Resource Based Tourism businesses through protection	- meet all terms of agreements - minimize conflicts by actions	On target, but with some start-up process issues.
- provide road access through maintenance and development of access	- maintain 1,947km of primary and secondary access during term	On target

Table 4 Continued

Audit Team Assessment of Degree of Achievement – 2003-2008 Wabigoon Forest FMP Objectives (April 1, 2003 to March 31, 2005).		
Objective	**Targets**	**Achievement**
- conduct activities in a manner that protects values	- no encroachment onto private or park lands - protect known values	On target
- protect archaeological and cultural heritage sites while minimizing fibre loss and mitigation costs	- no negative impact on identified sites	On target
C. Provision of Forest Cover		
- covered under A. Forest Diversity Objectives, and B. Social and Economic Matters.		On target, and it should be met by implementing A and B above.
D. Silviculture *(labelled C. in FMP)*		
- broad objective is to implement planned levels of harvest, renewal and maintenance contained in the FMP to aid in the achievement of the 14 specific management objectives stated under A. Forest Diversity Objectives, and B. Social and Economic Matters.		On target, and it should be met by implementing A and B above.

3.7.2 Review of RPFO Assessment of Sustainability

As stated in Section 3.6.3 Report of Past Forest Operations, the audit team did not review the 1993-1998 RPFO.

The RPFO was reviewed by the previous auditor during the course of the 1995-2000 IFA. On page 26 of AuditFor's Report it was stated that, "a satisfactory and affirmative assessment of forest sustainability was made." In addition, it stated that, "forest sustainability trends and comparisons of forest conditions and progress towards the desired future forest conditions are also confirmed by the Comparison and Trend Analysis of Planned vs. Actual Forest Operations".

The audit team has very briefly scanned the 1993-1998 RPFO and has a comparable opinion.

3.7.3 Review of the Comparison and Trend Analysis of Planned versus Actual Forest Operations

As part of the audit, the auditee prepares a summary of activities over several plan terms. This is known as the Comparison and Trend Analysis of Planned versus Actual Forest Operations Report (previously defined as the "Trend Analysis Report"). It provides a historical perspective on forest management activities and forest condition. The Trend Analysis Report for the Forest spanned 11 years of planning and operations between 1993/04 and 2004/05.

The original submission of the Trend Analysis Report did not meet the IFAPP requirements. One of the audit team's objectives in asking for improvements to the Trend Analysis Report was to enhance its usefulness for the upcoming 2008-2018 FMP. Weyerhaeuser submitted the revised Trend Analysis Report on October 25, 2005. The audit team

reviewed the revised Trend Analysis Report according to the IFAPP procedures and confirmed that it met the IFAPP requirements. The correct and complete Trend Analysis Report is contained in Appendix A. All of the discussion below refers to the Crown managed portion of the Forest as detailed in the Trend Analysis Report.

The total landbase declined by approximately 24,000ha (4.0%) while total production forest area declined by approximately 14,000ha (5.1%). Most of the changes were related to the recent withdrawal of nearly 21,000ha for new parks associated with the Ontario Living Legacy Land Use Strategy. Other changes resulted from the new FRI and boundary adjustments.

There were notable changes in the area contained in key working groups. Balsam fir experienced a precipitous decline in area, attributed to mortality from spruce budworm and reclassification to other FUs. The poplar working group increased by almost 20,000ha (26%) and the spruce working group increased by approximately 53,000ha (35%). These changes reflected an updated inventory and implementation of renewal strategies.

Table 1 of the Trend Analysis Report showed no depleted area as of 2003 and approximately 3,800ha of barren and scattered area, compared to a total of approximately 42,000ha of depletions and 13,500ha of barren and scattered five years previously. This significant decline was the result of a decision to assign depleted areas to age class 1-10 years based on actual or anticipated renewal treatments and a reassessment of barren and scattered areas to verify their status. Given the highly successful renewal program on the Forest, the audit team considers this approach reasonable, although it is not the norm.

There was an evolution in the description of FUs in an effort to better describe the diversity of forest types on the Forest and align these descriptions with Provincial direction. Forest units have increased in number from six in 1993, based on working groups, to 14 in 2003. The most notable changes were the creation of five mixedwood FUs.

Table 5 was developed to summarize trends in the utilization of harvest area and harvest volume. Consolidation of FUs into broad groupings as either conifer dominated or hardwood dominated was considered helpful to the assessment. Area from the Sh_All FU was evenly divided between conifer and hardwood for purposes of the assessment. Utilization of the AHA and planned volumes was low until the current term. The 2003-2008 FMP term was based on only a single year of data and may not be representative of the full five year term, once completed. However, the Trend Analysis Report states that the increasing use of the available harvest, apparent in the current term, should become a trend because it reflects changes in Weyerhaeuser's fibre procurement program which now relies more on wood from the company's licence areas and less on purchased wood.

Table 5. Actual versus planned harvest by area and volume (%).

	1993-1998	1998-2003	2003-2008
Conifer area	71	73	89
Conifer volume	74	76	106
Hardwood area	51	78	87
Hardwood volume	35	34	68
All Species area	68	74	89
All Species volume	64	67	94

Interpretation of the summary of age classes by FU contained in the Trend Analysis Report is complicated by changes in FUs over the three planning terms and the significantly smaller area (approximately 63,000ha less) of production forest landbase as reported for the 1998-2003 FMP using information contained in Table FMP-9 as the source data. To simplify the assessment the audit team grouped FUs into broad categories (conifer and hardwood dominated) and broad age classes, and did not use the 1998-2003 FMP information in the interpretation. Once again, area contained in the Sh_All FU was evenly divided between conifer and hardwood FUs for the purpose of the assessment. Table 6 illustrates changes in conifer FU age class structure between 1993 and 2003.

The increase in young age classes in conifer dominated FUs was principally attributable to an increase in the area of young jack pine stands. A portion of the increase was associated with the assignment of depleted area to the 1-10 year age class at the start of the 2003 FMP, as discussed above, whereas this was not the practice in previous plans. Mid-aged balsam fir stands accounted for

approximately 46,000ha in 1993. The balsam fir FU was eliminated by 2003 because of mortality associated with an outbreak of spruce budworm. The area was distributed among a variety of FUs and age classes.

Table 6. Summary of changes in conifer FU age class distribution for the production forest (from 1993 to 2003).*

Age Class (yrs)	1993-1998 ('000 ha)	% of Total	2003-2008 ('000 ha)	% of Total	Trend
1-40	98.7	26	126.1	36	Increase
41-80	175.3	47	121.4	35	Decrease
81-120	89.7	24	91.6	26	Stable
121+	13.5	3	12.0	3	Stable
Total	377.2	100	351.1	100	

*Excludes Barren and Scattered Areas

The principal change in age class distribution within hardwood dominated FUs was the significant increase in mid-aged stands (see Table 7). On a forest-wide scale, however, this was not a significant change (6.6% to 8.7% of the total production forest landbase). The amount of old growth forest remained stable in both conifer dominated and hardwood dominated stands.

Table 7. Summary of changes in hardwood FU age class distribution for the production forest (from 1993 to 2003).*

Age Class (yrs)	1993-1998 ('000 ha)	% of Total Area	2003-2008 ('000 ha)	% of Total Area	Trend
1-40	29.4	33	20.1	25	Decrease
41-80	33.2	38	48.4	61	Increase
81-120	24.7	28	10.7	13	Decrease
121+	1.3	1	1.1	1	Stable
Total	88.6	100	80.3	100	

*Excludes Barren and Scattered Areas

The preferred regeneration methods have varied over the three planning terms covered by the Trend Analysis Report. There was a noticeable increase in the reliance on natural regeneration. This reflects the increased harvesting of poplar stands and recent efforts by Weyerhaeuser to utilize natural regeneration methods on suitable areas that previously would have received artificial regeneration treatments. Preferred methods of artificial regeneration remain mechanical site preparation followed by either planting container stock seedlings or by direct seeding of jack pine. While the total number of trees planted has increased, the estimated proportion of total harvest area planted has decreased from approximately 80% to 60%. Weyerhaeuser plans to increase its seeding program and, as a result, planting levels will continue to be adjusted. Planned and actual chemical tending levels have increased. Spacing treatments in young plantations have typically not achieved the planned levels. The need for a review of the spacing program to ensure that it is consistent with FMP objectives was discussed previously in the audit report (See Section 3.4.4).

Table 8 illustrates an increasing trend in the application of regeneration treatments (natural or artificial) to harvest areas. The consequence of the short delay between harvesting and regeneration is that less than the full harvest area can be reported as regenerating during the same period. The remaining area should be regenerating during the subsequent reporting period. The audit team considers the current scale of the renewal program to be appropriate to the maintenance of the forest landbase over time.

Table 8. Harvest versus regeneration treatment (average annual).

	1993-1998	1998-2003	2003-2008	All Years
Harvest Area* (ha)	3,589	5,028	5,676	14,293
Regeneration Treatment Area (ha)	2,827	4,495	5,423	12,745
Regeneration Treatment (%)	78	89	96	89

*Includes Bypass

The Trend Analysis Report presented figures on regeneration success by comparing the area harvested between 1990 and 1995 (15,608ha) to

the areas surveyed for regeneration success (17,689ha) and declared FTG (16,779ha) between 1997 and 2001. The assumption is that most of the area harvested would be captured in regeneration surveys taking place some seven to 11 years later. More area was surveyed than was harvested. Of the area surveyed, approximately 95% met FTG requirements. Virtually all of the surveyed area declared not successfully regenerated was attributed to area lost to roads and landings. The survey results are consistent with the audit team's field observations that a very successful renewal program is in place on the Forest.

3.7.4 Achievement of Forest Sustainability

Prior to the implementation of the CFSA the objective of forest management was to provide timber to the forest industry in a manner consistent with sound environmental practices and to provide for other uses of the forest. With implementation of the CFSA in 1994, recognition was given to the importance of forest sustainability. It should be kept in mind that the means of achieving forest sustainability under the CFSA is through the management of forest cover. According to the CFSA forest sustainability is defined as long term Crown forest health. Two key principles are associated with forest sustainability:

- Large, healthy, diverse and productive Crown forests and their associated ecological processes and biological diversity should be conserved.
- The long term health and vigour of Crown forests should be provided for by using forest practices that, within the limits of silvicultural requirements, emulate natural disturbances and landscape patterns while minimizing adverse effects on plant life, animal life, water, soil, air and social and economic values including recreational values and heritage values.

The methods of planning for and assessing the achievement of forest sustainability are described in the FMPM. It begins with a process that includes gathering background information, setting objectives and developing strategies, identifying and analyzing management alternatives, selecting a preferred management alternative, and identifying specific areas for forestry operations. Throughout the process, opportunities are available to the public to participate and provide input into the development of the FMP. The assessment of achievement of forest sustainability involves the analysis of trends associated with a set of criteria and indicators of sustainability as given in the FMPM. The 1998-2003 and the 2003-2008 FMPs used the six forest sustainability criteria which are listed in Table 9.

The problem of defining forest sustainability continues to be a concern shared by the auditors and forest managers in Ontario. In recognition of these problems, the 2004 FMPM emphasizes management by objectives and replaces a formal analysis of forest sustainability with a qualitative assessment. The following qualitative assessment of sustainability is made in the context of this direction.

At each site the audit team examined the surrounding mature forest and the record of the forest conditions prior to harvest to evaluate whether the forest renewal activities were consistent with the plans and suitable to the forest and site conditions.

The audit team found that the large majority of the forest renewal activities examined were creating forest conditions that are expected to create future forests similar in composition and structure to the existing forest.

Stand density management, either from planting or spacing, will lead to diameter growth rates above those resulting from fire initiated stands. Coarse woody debris and snag levels will be lower than those found in natural stands, yet are expected to be sufficiently abundant to maintain ecosystem function and biodiversity based upon the audit team's familiarity with the literature and experiences in intensively managed stands. These stand elements will be further protected through the application of the NDPEG.

The rate of renewal is consistent with the rate of harvest according to the Trend Analysis Report and the observed FTG areas in the field. The renewal monitoring program is robust and should continue to supply evidence to determine if forest objectives are being met and, further, that these objectives are consistent with the concept of forest sustainability.

The harvest pattern during the audit period consists of small forest patches. This contrasts with the large progressive clearcuts and natural fire patterns from previous decades. Application of the NDPEG

will reverse this trend to create more natural patterns.

The rate of harvest is consistent with the approved levels. The audit team estimated that the mean annual volume growth based on FMP tables and SFMM projections is approximately 1.8m^3/ha/yr. The harvest rate is 2.4m^3/ha/yr. Over time, as the forest average age and harvest levels decrease, the growth rate of the more vigorous young forest will match the harvest rate.

The audit team previously noted that a small number of mixedwood sites are being converted to pure conifers and purer hardwoods and this is consistent with the rates described in the FMP. The audit team has also commented on some isolated problems on fine textured soils as described in Section 3.4.3 of this audit. Neither of these factors is significant enough to affect the sustainability of the Forest.

The evidence encountered by the audit team strongly suggests that long term forest ecosystem health will be maintained. Hence, the forest is being managed sustainably based upon the legal definition. In addition, the harvest rate is necessary to meet the FMP objectives. Given the satisfactory quality and rate of forest renewal, the forest management observed by the audit team meets the qualitative measures of sustainability.

Table 9 summarizes the overall assessment of the Forest's sustainability by the audit team.

Table 9. Summary of assessment of forest sustainability on the Forest.

Forest Sustainability Criteria	Met (Yes/No/ Partial)	Audit Team Comments	Related Recommendation, Suggestion or Best Practice
Biodiversity	Yes	Forest types, tree species and age classes are being maintained. Efforts to ensure that Pw continues to be adequately represented on the landscape are under way. The Northwest Region's preferred wildlife species' habitats are being maintained.	Recommendations 7, 10, 11, 12 Suggestion 13, 14
Forest Condition and Ecosystem Productivity	Yes	The forest land base is stable. The forest cover is being well maintained and the renewal levels are commensurate with the harvest and very effective. Free-to-Grow status is being achieved across the Forest and the new growing forest will resemble the old forest.	Suggestion 8, 15
Soil and Water Conservation	Yes	Water quality and quantity is not being affected by forest operations. The few fine-textured-soil sites are currently being given careful operational consideration.	Recommendations 9, 15 Suggestion 12, 17
Global Ecological Cycles	Yes	Forest renewal was balanced with harvest.	
Multiple Benefits to Society	Yes	The AHA is fully allocated, incidental wood products are being supplied and non-timber activities are being maintained at acceptable levels.	Recommendations 8, 14, 16 Suggestion 7 Best Practice 3

Table 9 Continued

Forest Sustainability Criteria	Met (Yes/No/ Partial)	Audit Team Comments	Related Recommendation, Suggestion or Best Practice
Accepting Society's Responsibility for Sustainable Development	Yes	The LCAC is active and provides local input. Aboriginal opportunities are communicated and work with the communities continues. The selected management alternative balances supply and demand. Utilization standards are good. Compliance process issues identified by the audit team must be addressed.	Recommendations 2, 16, 18, 19 Suggestions 1, 2 Best Practice 2

In the context of the audit team's field site observations, the qualitative assessment, available quantitative values, document examination, and conversations with the LCAC, MNR staff and Weyerhaeuser personnel, the audit team makes the judgment that the future forest will resemble the existing forest. This bodes well for the Forest's future ecological status, biodiversity and the supply of future timber and non-timber values.

3.8 Contractual Obligations

The terms and conditions of the most recently executed SFL, dated May 14, 2003, were examined by the audit team and have been met, except for three conditions. These involve a Memorandum of Agreement (MOA), the implementation of the previous IFA Action Plan and Compliance Planning. The first is the MOA with Columbia Forest Products which was not required as the facility was not constructed. The second was that some of the 1995-2000 IFA recommendations have not been met.

Appendix E of the Licence identifies three Ministerial Wood Directives on the Forest. These wood directives require Weyerhaeuser to enter into MOAs with the facilities and to make the following volumes available:

1. Through a conditional commitment - Wabigoon Forest is part of the supply area for hardwood fibre for Columbia Forest Products Inc. The total commitment from the supply area is 175,000m^3 of hardwood fibre annually. The Wabigoon Forest, through a long-term MOA, may contribute a portion of this volume. This supply of hardwood fibre will be comprised of veneer quality fibre which will go directly to Columbia, and oriented strand board quality fibre which will form part of a fibre exchange and flow veneer quality fibre to Columbia Forest Products Inc.
2. To Bowater Canadian Forest Products Inc. (Thunder Bay) for 200,000m^3 of softwood fibre annually from the Trout Lake and Wabigoon Forests through a long-term MOA.
3. To Abitibi-Consolidated Company of Canada (Kenora and Fort Frances) for up to 186,000m^3 of conifer fibre annually from the Trout Lake and Wabigoon Forests through a long-term MOA.

Weyerhaeuser has MOAs in place with Abitibi and Bowater. There is no MOA with Columbia Forest Products as the Company has decided not to construct a facility.

Initially, Appendix E of the SFL contained two separate hardwood obligations: one to Tolko Industries Ltd. and one to Columbia Forest Products. When Tolko Industries decided not to proceed with their project, this wood supply was identified in a new Request For Proposals by MNR and it resulted in Trus Joist McMillan starting a timberstrand mill in Kenora. When Weyerhaeuser acquired both MacMillan Bloedel and Trus Joist and became the sole owner of the facility, MNR removed the wood directive from Weyerhaeuser's SFL without removing the now obsolete Ministerial wood supply commitment for Columbia Forest Products from Appendix E.

After submission of the Draft IFA Report on November 15, 2005, the audit team was contacted in writing on December 14, by Ainsworth Engineered Canada LP about their efforts to establish an MOA with Weyerhaeuser. The MOA would deal with an annual supply of 18,000m^3 of hardwood for

Ainsworth from the Forest. Ainsworth operates an oriented strand board facility located in Barwick, near Fort Frances. While this is not part of Weyerhaeuser's obligations under the current SFL, the audit team wishes to draw MNR's further attention to the matter.

MNR previously advised Ainsworth to approach Weyerhaeuser on the development of an MOA and discussions began October 1, 2004. In November 2004, Weyerhaeuser advised Ainsworth that it was not interested in developing an MOA and in December, they affirmed their decision in writing. Weyerhaeuser made their position clear to MNR on the reasons for not proceeding. Subsequent discussions in January and February 2005 with Weyerhaeuser and MNR failed to make any progress on this matter.

It is rather unfortunate that neither MNR nor Weyerhaeuser raised this topic with the audit team during the audit. The audit team wishes to re-emphasize that wood supply is crucial to the socio-economic stability of communities on the SFL and in the surrounding area, and it helps meet forest sustainability criteria. With this in mind, the audit team urges MNR to take the appropriate steps to resolve this issue with both parties promptly.

The FMP identified that Bowater will receive 1,000,000m^3 of conifer from the Forest, which matches the wood directive. No wood is shown going to Abitibi Consolidated during the 2003-2008 period of the plan. Weyerhaeuser's MOA with Abitibi identifies that Abitibi will not obtain fibre from the Forest without drawing first from all other possible sources. The Plan however does identify that the new Trus Joist facility will receive 400,000m^3 from the Forest over the five year period. The approved FMP also calls for MNR to re-examine the commitments if there is an actual shortage of fibre available during its implementation.

Compliance responsibilities have not been assigned to Overlapping Licensees. Contractor field staff conduct most of the field inspections and report their findings back to Weyerhaeuser in order to complete the required reports. Spot checks, usually by spring aerial reconnaissance flights, are conducted by Weyerhaeuser to verify the observations reported to them.

While Weyerhaeuser met its compliance planning and monitoring responsibilities as stated in the SFL document in a technical sense by producing plans which MNR approved, the plans did not meet the requirements of the Minister as laid out in the FMPM. In this sense therefore, Weyerhaeuser did not fully meet its contractual obligations of this part of the SFL document. To address this issue and to ensure that both Weyerhaeuser and MNR meet the requirements, the audit team has made a series of recommendations and suggestions which can be found in Section 3.6.1.

As stated previously, there were five Trespasses, one Repair Order and one charge by the Department of Fisheries and Oceans issued during the audit term.

The previous IFA, for the 1995-2000 period, contained 15 recommendations which resulted in the completion of an action plan, its implementation and a status report all of which met the licence conditions as literally stated. However, the audit team found that two of the recommendations have not been met and one has been partially met, despite the Final Status Report's claim.

The recommendations of the previous audit and the audit team's findings on their achievement are shown in Table 10. The two recommendations that have not been met involve continued lack of snag retention. The recommendation on blockage of drainage has been met for recent construction, but not for older drainage ways.

Table 10. Summary of achievement of recommendations from the 2000 Wabigoon Forest IFA.

Recommendations from the 2000 Wabigoon Forest IFA	Achievement
The audit team recommends that the Local Citizens' Advisory Committee be provided with documentation concerning plan amendments well in advance of meetings where they are expected to discuss and provide comments and recommendations to the District Manager, in order that they have sufficient time to consider the merits of such amendments.	Met
The audit team recommends that the Local Citizens' Advisory Committee be encouraged to review Annual Reports and Reports of Past Forest Operations.	Met
The audit team recommends that the introduction of new or additional silvicultural treatments be appropriately amended in the Forest Management Plan.	Met
The audit team recommends that the company monitor the work of contractors and overlapping licensees to ensure that cutover sites retain, at least, the minimum number of snags, in accordance with the "Forest Management Guidelines for the Provision of Marten Habitat".	Not Met
The audit team recommends that the company monitor the work of contractors and overlapping licensees to ensure that snags are distributed throughout the harvested cutover and that the snags are of sufficient size to ensure that the purposes and intent of the "Forest Management Guidelines for the Provision of Marten Habitat" are met.	Not Met
The audit team recommends that concerted efforts be made to ensure that garbage related to forest operations is removed from the forest and that harvest staging areas be rehabilitated.	Met
The audit team recommends that the company adhere to the practices outlined in the "Environmental Guidelines for Access Roads and Water Crossings", for road construction within 100 metres of AOCs.	Met
The audit team recommends that a program for inspecting and clearing all water ways and culverts of blockages be put in place and monitored on a regular basis.	Met for recent drainage ways, not met for older drainage ways
The audit team recommends that the company and MNR develop a system to quickly assess the quality of culvert installation as soon as possible after installation to ensure that they meet the "Environmental Guidelines for Access Roads and Water Crossings".	Met
The audit team recommends that the company promote the acquisition or modification of equipment by contractors or overlapping licensees in order to minimize rutting damage on cutover sites.	Met
The audit team recommends that the company ensure all harvested fibre is utilized.	Met
The audit team recommends that the company develop an audit trail system to track Forest Operations Prescriptions (FOPs) and the appropriate silvicultural ground rules (SGRs) in connection with any given forest unit.	Met

Table 10 Continued

Recommendations from the 2000 Wabigoon Forest IFA	Achievement
The audit team recommends that the company use more site specific pr[illegible]criptions for site preparation in order to minimize site damage.	Met
The audit tea[illegible]ecommends that the company ensure that figures reported in the Annual Reports of primary and secondary road construction and use agree with actual data.	Met
Based on the results of our audit, AuditFor Inc. recommends that Sustainable Forest Licence #541953 for the Wabigoon Forest be extended for a further five-year term.	Minister has not extended term of Licence to date[16]

Earlier in this report, in sections 3.2.1, 3.4.2, and 3.4.6, the audit team provided comments on the outstanding items and has recommended that continued action be taken on these matters.

The conditions of the Forest Renewal Trust have been met. The forest renewal charges have been paid to the Trust over the audit period. The balance on March 31, 2005, was $4,060,506.55. The minimum balance of $2.1 million, identified in Appendix D of the Licence, has been maintained over the period. In October 2005, the balance was some $5.1 million.

Joint analyses by Weyerhaeuser and MNR to reconsider the rates of Forest Renewal were completed during the period. Rates at March 31, 2005, were $3.50/$m^3$ for SPF.

All Forest Renewal Trust Fund records are kept in Tacoma, Washington. The audit team found that upon an inquiry by Weyerhaeuser Dryden staff to monitor balances or approve invoices, the response from Tacoma was prompt and friendly. As an example, invoices are reviewed monthly by the Dryden silvicultural and operational staff to ensure accuracy and cost eligibility for payment.

During the field site inspection the audit team conducted a sample assessment of the projects funded under the Renewal Trust Fund for the fiscal year 2003/04, as previously discussed in Section 2.1.2(c). The assessment determined that the maps, records, and fieldwork associated with Forest Renewal Trust Account expenditures for 2003/04 were accurate and that the fieldwork was appropriate to the site conditions encountered.

Weyerhaeuser met its licence conditions with respect to FIM and its responsibilities for XYZ lands. Crown charges have been paid and pesticides were appropriately used. As mentioned previously in this report, utilization on the Forest was satisfactory.

[16] "It is in final process." (Voice communication with MNR Industrial Relations Branch, February 13th, 2006)

4.0 Summary of Conclusions and Recommendations

This report presents the findings of the audit team which conducted the IFA on the Wabigoon Forest covering the 2000-2005 period. This was the second IFA carried out on the Forest, the first one covered the 1995-2000 term.

The audit team was very impressed with the operations carried out over the last five years by Weyerhaeuser, however ran into issues in the planning and monitoring area which require improvement by both Weyerhaeuser and MNR.

The summary comments below deal with the eight guiding principles of the IFAPP. The detailed discussion and findings are to be found in the Report's pertinent sections.

Commitment

Both Weyerhaeuser and MNR are quite evidently committed to sustainable and competent forest management activities. Their policies and dedication to forest management on the Forest, backed by documentation and training, served to demonstrate this.

Public Participation

The LCAC is a group of interested and hard working representatives of the local community and it provides very worthwhile advice to the MNR District manager. MNR is asked to increase Aboriginal involvement on the Committee and to ensure that the Committee is more closely involved with the planning team. Both Weyerhaeuser and MNR have encouraged and fostered Aboriginal forest-related economic opportunities and have met with some success. Dialogue and understanding continue to be a challenge for the parties involved.

Forest Management Planning

Forest Management Planning was carried out in conformance with the FMPM. The Plans contained the required components including the appropriate policies and objectives, local resource management plans, and assessment pre-requisites. Non-conformance was apparent in the monitoring area and is dealt with in Section 3.6.1 of the audit report.

Although the planning schedule was compressed for the preparation of the 2003-2008 FMP, the planning team conducted the process well. The new FRI was completed during the term and was used in the 2003 Plan.

There were start-up challenges for the development of RSAs with RBT establishments which must be addressed as more Agreements are signed. The SFMM modelling for the 2003-2008 FMP was well conducted. The management alternative selection process was conducted according to requirements. Going forward into the next plan, the MNR must review its regional wood supply targets to consider the medium term wood supply for the Forest.

Planning for operations was done well and allocations fit the SFMM outputs. Ninety-nine percent of the AHA was allocated.

Plan Implementation

Harvest operations were conducted exceptionally well on the Forest. Utilization standards were high and slash pile management was well carried out. Roads were located well and that resulted in minimizing the number of water crossings. Roads were constructed to the lowest possible standard over the harvest area to prevent over-building and Weyerhaeuser was given a best management practice for this work. There was very limited

evidence of soil compaction and rutting on a few fine textured soil sites and Weyerhaeuser is encouraged to continue to reduce these effects.

Renewal activities were also planned and carried out well and the results are exemplary. Silvicultural prescriptions are matched to site conditions. The skill and experience of Weyerhaeuser staff was amply demonstrated in both harvest and renewal operations. Weyerhaeuser has met its FTG survey targets and the audit team's field observations confirmed the excellent levels of success.

There is current discussion between Weyerhaeuser and MNR on a silvicultural initiative which on certain sites involves moving to wider spacing within plantations and a greater reliance on seeding. This will result in lower tree planting levels. The audit team concluded that this shift is within the existing SGRs and is consistent with the FMP. The audit team also found that this approach will be cost effective and will not jeopardize forecasted growth targets. There is a proviso however, and that is that Weyerhaeuser must carefully review its spacing program during the development of the next FMP to ensure that the levels are commensurate with the added spacing requirements that increased seeding brings.

AOC prescriptions were prepared and then implemented on the ground with precision and they afforded adequate protection of the values involved. Wildlife tree retention was extremely poorly implemented and despite the last IFA recommending improvements, no steps were taken again in this audit term to retain the required standards for the harvested areas.

Water crossings have been much improved over the last five years, since the last IFA. Installation techniques are currently excellent. However, Weyerhaeuser must yet deal with older water crossing which are at high risk after rain storms.

System Support

The audit team found that there was effective communication between Weyerhaeuser and MNR. Staff training records were available. Weyerhaeuser's EMS has a good built-in training program. Weyerhaeuser's contractor training is a crucial part of their compliance program and high standards should be maintained.

While, at the outset, the audit team experienced delays in obtaining some forest management information for the audit from Weyerhaeuser, the documents and maps were delivered and were of good quality.

Monitoring

The FMP contained the correct statements about compliance and compliance planning and the Five Year Compliance Strategy met requirements well. However, none of the Annual Compliance Plans over the period met basic requirements, despite the fact that they were approved by MNR. This situation must be addressed immediately.

In addition, Compliance Inspection Reporting was very poor in quality over the period and did not meet Provincial requirements. Field inspections were carried out by Contractors and Weyerhaeuser staff that were not fully familiar with the reporting requirements. Both MNR and Weyerhaeuser must take action to improve this situation and ensure that standards are raised to meet provincial statutory requirements. If contractors are to conduct their own compliance programs, then continual training must be further emphasized.

Appropriate monitoring plans and reporting should have identified the continued deficit in wildlife tree retention on cutovers. This situation was extant during the previous IFA and occurred again unchecked over this audit period. MNR must enforce the guidelines.

Achievement of Management Objectives and Forest Sustainability

The audit team found that, while there was overlap and duplication among the objectives of both the 1998-2003 and the 2003-2008 FMPs, Weyerhaeuser met the objectives for 1998-2003, with a few exceptions, and is on target for the 2003-2008 term. The Provision of Forest Cover objective is partly compromised by the inadequacy of wildlife tree retention and there was some limited concern over the compaction and rutting of fine textured soil sites. Both items are addressed by recommendations and suggestions in this report.

As mentioned in Section 3.7.2, while the audit team did not review the 1993-1998 RPFO, its inspection of the previous auditor's review of that RPFO confirms the conclusions drawn by the 1995-2000 IFA report. The Comparison and Trend Analysis Report provided the audit team with a longer term view of the Forest and its progression. Good FTG success was verified by the audit team's aerial and ground observations.

The audit team has concluded that the Wabigoon Forest is managed sustainably, although, as described, improvements are required.

Contractual Obligations

Weyerhaeuser has met its obligations contained in its SFL, except for three conditions. The first is an obsolete wood supply directive to Columbia Forest Products which became redundant when Columbia chose not to construct a hardwood facility. The second is to fully act on three of the recommendations of the previous IFA. Two of them concerned wildlife tree retention, and one on the clearing of older drainage ways. The third condition involves not fully meeting the FMPM requirements for compliance planning and monitoring.

The Forest Renewal Trust Fund is well managed and the silvicultural obligations have been met. FTG surveys are up to date.

Final Recommendation

The audit team found that during the audit period 2000-2005, the Wabigoon Forest was managed sustainably, subject to the exceptions noted, and conformed to the requirements of the Crown Forest Sustainability Act (1994).

As a result, it is recommended that the Minister of Natural Resources extend the term of Weyerhaeuser's Sustainable Forest Licence No. 541953 for a further five years from 2022 to 2027.

The following Table lists the Report's recommendations, suggestions and best practices by each of the IFA's eight guiding principles.

Table 11. Summary of Recommendations, Suggestions and Best Practices.

Principle 1: Commitment
Best Practice: 1: Weyerhaeuser is to be commended for its pioneering efforts in achieving 3rd Party CSA Chain of Custody Certification and the successful development of its ISO Environmental Management System and accompanying booklet.
Principle 2: Public Participation
Recommendations: 1: In planning for the 2008-2018 FMP, MNR must ensure that joint meetings are scheduled with the LCAC and planning team at agreed upon stages of the planning process. 2: MNR must establish a mutually-agreeable framework for ongoing targeted dialogue and the exchange of information with willing First Nations. **Suggestions:** 1: MNR should evaluate its current strategies and develop new approaches to secure First Nations participation on the LCAC and planning team. 2: The LCAC should attempt to recruit a member with a general interest in snowmobiling or membership in a snowmobile club. 3: The MNR District Manager should attend at least one LCAC meeting per quarter. 4: MNR should provide greater guidance to the LCAC to ensure that its Summary Report includes all required components as specified in the FMPM. 5: MNR should consider designating a full time First Nations liaison person or committee with sufficient authority to deal with First Nations. **Best Practice:** 2: Weyerhaeuser is to be commended for its support of new business enterprises developed by WLON.
Principle 3: Forest Management Planning
Recommendations: 3: MNR must ensure that the Terms of Reference for the 2008-2018 FMP for the Forest is approved prior to submission of the first public notice of the formal public consultation process as required by the FMPM (2004). 4: Corporate MNR must test the methods of implementation for any new or revised guides and establish realistic phase-in requirements that adequately consider the potential impacts on existing processes and the capabilities of affected parties to implement the requirements. 5: Forest planning inventory responsibilities for both Weyerhaeuser and MNR must be clearly identified in the Terms of Reference for the FMP. 6: Weyerhaeuser and MNR must address the issue of insular and peninsular requirements of NDPEG in disturbances less than 100ha and must amend the current FMP as appropriate. 7: Weyerhaeuser must ensure that the next FMP includes a description of species that are classified as "of special concern", threatened or endangered as required in the 2004 FMPM. 8: MNR and Weyerhaeuser must review the Regional wood volume targets for the Forest to ensure that these volumes can be met sustainably, not only in the short term, but also throughout the medium term. **Suggestions:** 6: MNR and Weyerhaeuser should develop effective mechanisms to monitor, anticipate and address stakeholder issues and concerns from plan to plan. 7: Weyerhaeuser should develop mechanisms to improve communication and translation of RBT commitments between the forest management planning and RSA processes. 8: Descriptions of landforms and other physical features should be expanded and include management interpretations in the next FMP. 9: Difficulties encountered in preparing the inventory should immediately be brought to the attention of the Steering Committee for the Plan or the District Manager. 10: MNR and Weyerhaeuser should develop contingency plans for staffing and support in the event of unforeseen delays in the production of the 2008-2018 FMP.

Table 11 Continued

Principle 3: Forest Management Planning (continued)
11: MNR and Weyerhaeuser should consider conducting an LCAC field trip to visit the locations of a sample of proposed amendments.
Principle 4: Plan Implementation
Recommendations: 9: In the absence of a Provincial standard for site damage, Weyerhaeuser and MNR must work together to set their own standards for the Forest based upon the long term impacts on regeneration and soil productivity. 10: Weyerhaeuser must ensure that its Contractors and/or Overlapping Licensees leave the required number of trees on site. 11: MNR must enforce the requirements of the Natural Disturbance Pattern Emulation Guidelines with respect to tree retention. 12: Weyerhaeuser must report its success at meeting tree retention requirements in all future Forest Operations Information Program harvest reports and document their progress at meeting these requirements in subsequent Annual Reports. 13: The spacing program must be carefully reviewed during the preparation of the 2008-2018 FMP to ensure an adequate amount of area is being treated to meet the plan objectives. 14: Weyerhaeuser must regenerate tertiary roads that will not be used in the future. 15: MNR and Weyerhaeuser must continue efforts under the Forest Roads and Water Crossings Initiative to repair or remove high risk water crossings on the Forest. 16: Weyerhaeuser must ensure that all aggregate pits meet safety related standards of the Aggregate Resources Act by June 30, 2006 and meet all other requirements by October 31, 2006. Factors that must be addressed include the following: • no undercutting of the working face • the working face shall be sloped at the required angle of repose • the vertical height of the working face shall not be more than 1.5 metres above the maximum reach of the equipment • all pit faces must be sloped to the angle of repose when the site is inactive • all trees within 5 metres of the excavation face must be removed. **Suggestions:** 12: Weyerhaeuser should consider participating in the 2006 review of the Provincial Guide for the Protection of the Physical Environment. 13: Weyerhaeuser should ensure that even greater care is taken to prevent logging damage to residual red and white pine. 14: Weyerhaeuser and MNR should jointly identify targets by forest unit of the tree species and sizes that should be retained to meet the requirements of the Natural Disturbance Pattern Emulation Guidelines to clarify these requirements for field staff. 15: Weyerhaeuser should: • Reduce the potential for compaction on fine textured soils even further. • Consider rehabilitation on sites that may become compacted (e.g., mounding and planting). • Increase mineral soil exposure on fine textured soils scheduled for seeding. • Maintain or increase planting density on clay and silt soils associated with lacustrine, moraine and outwash plain landforms and on other sites where competing vegetation problems are anticipated. • Ensure seed sources and advanced growth is even better protected on lowland sites. • Enhance the training of site preparation operators to recognize natural regeneration opportunities associated with aspen stumps and residual trees. 16: Corporate MNR should consider developing procedures for chain of custody, and reliable estimates of genetic gain for improved seed as a component of a Provincial silviculture strategy. 17: Where it is possible and reasonable, Weyerhaeuser should plan road location and harvest operations to have in-bush chippers located on well-drained sites during operations.

Table 11 Continued

Principle 4: Plan Implementation (continued)
Best Practice: 3: Weyerhaeuser is to be commended for the high quality of its overall harvesting and road construction practices.
Principle 5: System Support Services
Suggestion: 16. Weyerhaeuser should continue to improve its data management and retrieval system prior to developing the next plan.
Principle 6: Monitoring
Recommendations: 17: Weyerhaeuser must seek expert advice and peer review of the plot dimensions used in its survey by June 30, 2006. 18: MNR must complete its five-year District Compliance Strategy which must include a strategy to conduct audits and spot checks and verify industry non-compliance reports with regard to Weyerhaeuser's Annual Compliance Plan. 19: Weyerhaeuser must ensure that future Annual Compliance Plans meet the requirements set out in the Guidelines for Forest Industry Compliance Planning and MNR must ensure that these requirements are met before approving the plans. 20: Corporate MNR must re-examine the requirements of Annual Compliance Plans to ensure that the information is not redundant with Five Year Compliance Plan and AWS requirements. 21: Weyerhaeuser must ensure that only certified compliance inspectors are used for field verification and reporting and that all observations from the compliance inspections are correctly reported with additional-tasks-to-be-undertaken tracked in the FOIP reports. 22: Weyerhaeuser must include a description and results of the monitoring procedure for AOC prescriptions that are exceptions in the ARs. **Suggestions:** 19: Weyerhaeuser should invite MNR Compliance Staff to its Annual EMS Awareness Training and its Biannual Operating Standards and Compliance Meetings. 20: Weyerhaeuser should respond in writing to letters from MNR which identify concerns about compliance issues.
Principle 7: Achievement of Management Objectives and Forest Sustainability
Suggestion: 21: Weyerhaeuser should carefully consider the development of the 2008-2018 FMP's objectives and targets with respect to clarity, overlap, ease of monitoring and evaluation of success.
Principle 8: Contractual Obligations
None
Conclusions
The audit team found that during the audit period 2000-2005, the Wabigoon Forest was managed sustainably, subject to the exceptions noted, and conformed to the requirements of the Crown Forest Sustainability Act (1994). As a result, it is recommended that the Minister of Natural Resources extend the term of Weyerhaeuser's Sustainable Forest Licence No. 541953 for a further five years from 2022 to 2027.

Appendix A: Comparison and Trend Analysis of Planned versus Actual Forest Operations Report

COMPARISON AND TREND ANALYSIS OF PLANNED vs. ACTUAL FOREST OPERATIONS

For the

WABIGOON FOREST

O.M.N.R. Dryden District, Northwestern Region

Weyerhaeuser
Ontario Forestlands

For the period from April 1, 1993 to March 31, 2005

Prepared By: Dec 13, 2005

Randy Fraser (date)
Planning Forester

I hereby confirm that this **Comparison and Trend Analysis of Planned vs. Actual Forest Operations** has been prepared in accordance with **Appendix C - Independent Forest Audit Protocol**.

1864 Dec 13/05
RPF Seal

Penny Ratushniak RPF (date)
Operations Forester

Comparison and Trend Analysis Of Planned versus Actual Forest Operations Report

Management Unit 130
Wabigoon Forest

Comparison and Trend Analysis of Planned versus Actual Forest Operations Report

Introduction

The report examines forest management activities over the current five year planning term (2003-2008) and the previous two five year planning terms (1998-2003 and 1993-1998). The current five year Forest Management Plan (FMP) (2003-2008) and the 1998-2003 FMP's were authored by David Salter, R.P.F. and were written under the regulation of the 1996 Forest Management Planning Manual.

The 1993-1998 TMP was also authored by David Salter, R.P.F. but was written under regulation of the 1986 Timber Management Planning Manual. The Wabigoon Forest is currently managed under SFL # 541953 granted by the Minister of Natural Resources.

Table 1: Summary of Total Area under Management
(Past and Current Plans - by Working Group)

Since the 1998 FMP a complete re-inventory of the forest resources inventory (FRI), of the Wabigoon Forest, has been completed. The current FMP is based on this new inventory.

The figures for the first term are from TMP-4.8.2 which reflects the Crown forest area (ownership 1). The figures in table 1 for the 1998-2003 term come from FMP- 1 and 2 and reflect only the crown managed land. For the 2003-2008 term FMP 1a and 2 were used for production of table 1 and FMP 1 was used to supplement the discussion below as the rationale for the change in the total forest area under crown management.

The total forested area under crown management has decreased by 21,035ha from the previous plan. This decrease is attributed to several factors. First and foremost is the reclassification of area to Parks, more specifically Unmanaged and Ontario Living Legacy (OLL). If we look at Park area, excluding areas within OLL, the areas are quite similar to previous plans. In the 1998-2003 plan there was 13,290ha of forested area within parks. In the 2003-2008 plan there are 13,448 ha; again this is excluding any area within OLL. If we include the areas within OLL in the 2003-2008 plan there are 34,313ha in Parks. This is an increase of 20,865ha and contributes to almost the entire loss of forested area within the current plan. FMP 1, 1a, and 1b in the 2003-2008 plan outline these numbers. The following will outline the rational used for the 2003-2008 term.

The planning forest resources inventory (PFRI) used for the 2003-2008 forest management plan utilized Crown land ownership grouping to reflect similar management intent of the forest. The common management considerations given to Park (MNR ownership 5), Unmanaged (MNR ownership 2) and the Ontario's Living Legacy areas (currently MNR ownership 1 until regulation is finalized) justified the classification of all these areas as Park in the PFRI. These areas do not contribute to the available harvest area for this plan but are considered in terms of the current and projected wildlife habitat they contain. This adjusted planning inventory is summarized in Table FMP-1b and was used throughout the remainder of the forest management plan.

Other reasons for the change in forested area are of a more minor nature and include: differences in typing based on new FRI, projection changes from Lambert to OBM, and changes in the management unit boundary lines to better reflect SFL area.

Production forest categories changed throughout the three terms defined. In the 1993-1998 TMP, Barren and Scattered (B&S) included areas that were harvested but not yet considered regenerated. This changed for the 1998-2003 FPM; areas recently harvested were broken out and included in the depleted category.

The inventory was sorted to determine the correct classification of Barren and Scattered and recently depleted stands. Areas that were classified as Barren and Scattered were reassessed to determine if they were truly Barren and Scattered areas, or if they were recent depletions that may or may not have received silvicultural treatment prior to plan start. If areas had, or were expected to receive silvicultural treatment prior to the start of

this FMP, they were re-categorized into the projected forest unit (and silvicultural intensity) in the 1-10 year old age class. True Barren and Scattered area was left as such in the PFRI. If areas were recent depletions, they were categorized as depleted in Table FMP-1, but reclassified based on silvicultural treatments in Table FMP-1a. Therefore, no area is classified as "depleted" in Table FMP-1a, as it has been more accurately classified as forested area (see Supplementary Documentation D for more detail of the updating of the forest resources inventory). Table FMP-1a utilizes the SFMMOWN ownership classification for data sorting. This accounts for the majority of the differences in the area within production forest over the plan terms.

Another significant reason for the changes over the plan terms is how the forest stands were grouped. This grouping changed for each of the plans. The most significant of these is the change in area within the "B" (balsam fir) working group. The majority of balsam fir stands have been reclassified under other groupings based on data from the new inventory. The new inventory shows that the majority of balsam fir dominant stands no longer exist, due to stand progression by natural and insect mortality. This has resulted in a decline in the balsam fir component within the forest and allowed for reclassification of these stands into other groupings that better reflect species associations.

Table 2 – Description of Forest Units

Table 2 summarizes the transition of Forest Unit classifications over the three planning terms. The current plan (2003-2008) is based on 14 forest units, which is an increase in two forest units from the 1998-2003 plan. Although there were no management problems evident during the 1998-2003 term that warranted a change in forest unit divisions, changes to the provincial forest management planning process and provincial policy precipitated the finer division of forest units for the 2003-2008 term. Historically, forest units were based on working group concept (dominant species by basal area), which grouped mixedwood stands with pure stands within a single forest unit. This resulted in considerable variations of yield, succession, and productivity estimates within a single forest unit. The 1993-1998 plan is based on this working group concept. The 2003-2008 plan has forest units that were established to separate the purer forest conditions from the more variable mixedwood conditions. The new FRI in 2001 allowed for the forest to be sorted by ecosite, as well as, species composition and site class. This additional sorting capability allowed for more refined management and modelling. Additionally, forest units that contained very small amounts of area were grouped for ease of modelling. Tables 2a, 2b, and 2c illustrate the forest units as they pertain to each planning term.

Table 3 – Summary of Planned and Actual Harvest Volumes

Table 3 summarizes the level of harvest volume for both planned volume and harvest volume on the Wabigoon Forest. The harvest level of the 1993-1998 and 1998-2003 terms were very low and was consistent with the under cut of the forest at 65% and 66% of actual versus planned harvest. The 2003-2008 is data representing only a single year of harvest (2003-2004) and shows volumes at 94% actual versus planned volumes. This has occurred by increasing cutting capacity on the licence along with a reduction in the reliance on purchase wood. This change in realizing harvest volumes should become a trend that will become evident over the next few years. There are several factors that have resulted in this change. First and foremost is the focus on reducing costs. Wood purchased on the open market is significantly more expensive than wood from the Company's licence and is inconsistent in supply. The company has focused on increasing its harvest contractor's efficiencies by increasing their size to help reduce their costs and in turn their rates for harvesting timber. Another reason for realizing harvest volumes is that the company has secured sales to outside facilities of fibre.

The volumes for the 1998-2003 FMP are FRI volumes from the mapped allocated harvest areas that reflect the AHA in the FMP. The allocations accommodated the MOA with Abitibi Consolidated and Tolko which, as well as, the requirements of the Dryden Pulp and Paper complex and the Ear Falls Sawmill. Harvest levels did not reach planned levels partially due to external sources not exercising their respective MOA's.

Table 4 – Summary of Planned and Actual Depletion Area

This table illustrates the progressive increase in harvest area off of the Wabigoon Forest over the terms beginning in 1993 and ending in 2004. The actual area harvested over the past terms did not quite meet the plan targets.

The 1993-1998 terms planned harvest was 5281 ha with an achievement of 3589 ha or 68 %. Again the company was undergoing a time of change, pulping of its own hardwood vs. purchasing from outside suppliers and the construction of the Ear Falls Sawmill.

During the 1998-2003 term, the average depletion per year was 5028 compared to a plan of 6700, or 75%. The depletion area was less than planned due to external sources not exercising MOA's. Harvest levels attained were sufficient to supply the needs of the dependant facilities and the forest management plan objectives related to harvest plan volume.

The 2003-2008 term has seen additional increase in realizing planned harvest levels. The 2003-2004 year saw depletion of 5676ha. This represents 88% harvest of a planned 6404ha. This increase is primarily due to three reasons. The first is the completion of the Ear Falls sawmill, and its ability to run efficiently and utilize its planned volume. Second is the continued reduction in reliance on external wood sources (purchase wood). The final reason is external sources exercising their MOA's.

Considering the variance that existed between harvested stand volume and forecast stand volume in the past two terms, the current terms allocations were set to provide the flexibility needed to accommodate all existing commitments.

Table 5 – Summary of Managed Productive Forest by Forest Unit

Table 5a & 5b are actually FMP 9 from the 2003-2008 and 1998-2003 FMP's respectively. Table 5c is a reproduction of Tables 4.8.2 and 4.9. The 2003-2008 FMP utilized new FRI and more concise descriptions of Forest Units then the 1998-2003 FMP, to compound the difficulty in the comparisons; the 1993-1998 term was written under the regulation of the 1977 Timber Management Planning Manual and used working groups.

During the three periods the methods of reporting depletions changed. For the 2003-2008 harvest depletions were placed in their respective productive Forest Unit. Previously, harvest depletions were reported as either "Barren and Scattered" or "Depleted" and were not considered part of the productive forest until such time as they were declared Free-To-Grow. The amount of barren and scattered also changed over this time, impacting the amount of productive forest that is reported. In some cases the B&S moved to non-productive sites and in others it was moved to productive sites. This is most evident in the 2003-2008 plans when compared to the 1998-2003 plan due to the new inventory that was produced for this plan.

Table 6 – Summary Report of Renewal, Tending, and Protection Operations

This table is intended to compare planned and actual renewal, tending and protection operations. The Wabigoon Forest has had no protection activities or uneven aged management renewal activities either planned or implemented for the duration of all three terms being discussed.

During the 1993-1998 term 3589 ha (annualized) of area was harvested, and 2827 ha were regenerated. Although the figure seems to fall short of the total, it reflects the average yearly harvest levels which increased years 1 to 5 given the delay for implementation of silviculture. Of that 2827 approximately 89% was regenerated artificially via direct seeding (51%), planting (46%), scarification (1%), and shelter cones (2%). Natural regeneration by clearcut and seedtree accounted for 11 % of the total. On average there was 2415 ha of actual mechanical site preparation versus the 1170 ha planned. Actual tending operations accounted for 0 ha of the 2054 planned for the term. The renewal program during this term followed past renewal practices by the Company dating back to the late 1980's when aerial seeding was a significant part of the program and seedlings production/availability was limited. Aerial seeding has been a successful renewal program in the North West region since the 1960's. The Company did not have a chemical tending program in place since it took over the

renewal program in the late 1980's and therefore no chemical tending occurred in this term. Scarification consisted of a very small program carried out on cut and skid sites where trees had been processed at the stump and a seed source from the cones was available. The availability of these sites was limited due to the large majority of cutover being mechanically processed at roadside.

During the 1998-2003 term 5028 ha (annualized) of area was harvested, and 4495 ha were regenerated. Of that 4495 approximately 89% was regenerated artificially via direct seeding (26%), planting (73%), and scarification (1%). The natural regeneration accounting for 11 % of the total was natural regeneration by clearcut and seedtree. On average there was 3627 ha of actual mechanical site preparation versus the 4370 ha planned. On average there were 94 ha of chemical site preparation that occurred versus the 300 ha planned. Actual tending operations accounted for 1683 ha compared to the 2600 planned for the term. During this term the Company accelerated its planting program and seedling orders versus the historical trend. This resulted in a reduction in the aerial seeding program. This was due in part to increased harvesting in competitive sites where planting was more suitable than seeding to achieve seedling survival. The Company initiated an annual chemical site preparation and chemical tending program during this period. It took several years for staff to develop a solid understanding and knowledge base in this field. Chemical site preparation was tested but preference was towards aerial tending established seedlings where guaranteed success was evident. Chemical site preparation was often not required to achieve seedling establishment and success.

During the first year of the 2003-2008 term 5676 ha of area was harvested, and 5423 ha were regenerated (annualized from 2003-2004 & 2004-2005 years). Of that 5423 approximately 69% was regenerated artificially via direct seeding (16%), planting (83%), and scarification (1%). The natural regeneration accounting for 31 % of the total was natural regeneration by clearcut. On average there was 3167 ha of actual mechanical site preparation versus the 2922 ha planned. There has not been any chemical site preparation that occurred versus the 116 ha planned. Actual tending operations accounted for 1217 ha compared to the 2417 planned for the term. A larger portion of area harvested during this term and in the later part of the previous plan were mixed hardwood or poplar forest units which were left to regenerate naturally. This resulted in an increase in the natural regeneration program versus historical trends. The Company maintained a high level of planting in the first year of this plan based on practices and seedling orders from the last term. This left limited land available for aerial seeding. The preference towards utilizing chemical for tending programs versus chemical site preparation continued in this term. Established regeneration areas are monitored on an ongoing basis for potential chemical tending need and is only prescribed if required to achieve silvicultural success.

The Company's current and proposed renewal program on the Wabigoon Forest for the remaining term of the 2003 plan is to move more towards historical practices since the late 1980's when aerial seeding was done on suitable sites versus a large scale plant program. Seedling orders and planting densities will also be reduced by utilizing the natural pine and spruce regeneration that is occurring on many of the harvested upland conifer sites. This natural conifer regeneration has been identified through field viewing and the Company's new regeneration program where surveys are conducted four years after the harvest year. Harvested areas that where dominate to hardwood forest units will be scheduled for natural regeneration to occur. Regeneration concerns identified through field audits and the regeneration surveys identifying potential fill planting or tending followup are assessed and implemented in the appropriate AWS if required. The intent is to meet FMP targets while capturing what is occurring naturally on the landbase and too achieve cost savings associated with these changes. This new strategy will be reviewed and assessed annually with the local MNR to ensure adherence to required targets.

Table 7 – Harvested Area Successfully Regenerated – Summary of All Forest Units

This table is intended to reflect the renewal success of areas based on their proposed future forest unit. This data was difficult to compile due to the magnitude of the information required. Much effort was put into completing the analysis for FTG.

The figures presented summarize the regenerated areas with the harvest year being between 1990 and 1995. Within this time frame the harvest levels were only beginning in increase and the implementation of high cost intensive silviculture treatments such as mechanical site preparation and planting were prevalent.

Of the five years in the term, surveys for silviculture success were undertaken on all five years. A total of 17,689 ha were surveyed during the period. This is 2,181 ha more that what was harvested from 1990-1995 (15,508ha). Note that areas assessed for FTG are completed on harvest sites approximately six to seven years old. Therefore the hectarage of the areas assessed do not align with the harvested hectarage of this report term. The Company was on an aggressive FTG assessment program during this term and started to assess areas that were less then six years old. This also accounted for the increase in assessed area versus area harvested. Of the 17,689 ha surveyed 16,779 ha or 95 % was deemed successfully regenerated. The remaining 910 ha was not deemed to be NSR or B&S, but simply requiring more time to reach the height standard as the stocking was good. Areas not available for regeneration during this term equal approximately 900ha which is made up of roads and landings. Based on the high level of silviculture success, the treatments were appropriately applied and as a result have yielded exceptional future stands.

Currently Weyerhaeuser is ahead of the proposed FMP schedule for FTG assessment time frame requirements versus age of harvest/renewal. The silviculture groundrules for the 2003-2008 plan changed considerably from the 1998-2003 term, where many forest units have had an increase in the number of years before a stand is targeted to reach FTG status. Therefore the Company has decided to delay current FTG assessments until harvested areas fall in line with the FMP/SGR target years which is usually a ten year span. FTG yearly surveys are proposed to commence in the year 2007 when assessments will be done on the areas harvested in 1997 (areas harvested prior to this have already been assessed). By following the current FMP/SGR assessment time frame the Company will be able to report more accurately the silvicultural effectiveness on these regenerating stands in the annual reports. A plan will also be developed for those areas previously assessed as not meeting FTG standards (areas requiring additional years to reach acceptable FTG height requirements) for followup field assessment and possible classification as FTG. This will be done before the end of the current plan.

Below is a table (Table 7a) detailing the five years of surveys.

Table 7a Survey history for the Wabigoon 1997-2002

Annual Report Year	AR7 (Ha)	AR7A (Ha)	AR7A (Ha)	AR7A (Ha)	AR7B (Ha)	AR7B (Ha)	AR9 (Ha) FTG	AR9A (Ha) FTG	AR9B (Ha) FTG
	Assessed	Silv. Success	Assessed	Silv. Success	Assessed	Silv. Success			
1997-98 Yr5 (Ha)	**2,883**	**2,595**	2,883	2,595	0	0	**2,595**	2,595	0
1998-99 Yr1 (Ha)	**2,022**	**1,525**	2,022	1,525	0	0	**2,022**	2,022	0
1999-00 Yr2 (Ha)	**3,010**	**2,823**	3,010	2,823	0	0	**3,010**	3,010	0
2000-01 Yr3 (Ha)	**5,350**	**5,010**	5,350	5,010	0	0	**5,337**	5,337	0
2001-02 Yr4 (Ha)	**4,424**	**3,402**	4,234	3,402	189	189	**3,815**	3,626	189
Total (Ha)	**17,689**	**15,355**	**17,499**	**15,355**	**189**	**189**	**16,779**	**16,590**	**189**

Source: Annual Reports (Table AR- 7, 7a, 7b, 9, 9a, 9b) for 1998-2003 Wabigoon FMP

During this report term Weyerhaeuser has done a very good job at meeting the FMP Renewal and Maintenance Objectives of the 1998-2003 plans. As per Objective 1: To economically regenerate depleted areas to desired species through environmentally sound Silvicultural practices i.e. section ii) Regeneration treatments will follow harvesting as promptly as is feasible and section iv) silviculturally treated areas will be surveyed and monitored to

measure success of treatments. Objective 2: To maintain or increase the productivity of pulpwood stands as well as maintain or increase the production area of desired species.

It is planned that current renewal treatments in the 2003-2008 FMP will meet the Silviculture Objectives of the plan. As per Objective D 1: To maintain long term productivity of the forest in an environmentally sound manner through forestry practices of harvesting, renewal, protection, access and stand maintenance of the ecological diversity of the landscape. The target is to maintain the managed Crown forest availability for timber production at 460,000 hectares. Objective D 2: To increase the productivity (yield per hectare) of the harvested, managed forest land base through Silvicultural practices. Target one is to actively convert the balsam fir forest unit, through harvest and renewal activities, or through reinventory where appropriate, to other forest units to increase the overall productivity of the Wabigoon Forest and as per target two, to increase the average yield of managed stands at maturity over the yield from naturally established stands through the application of intensive Silvicultural treatments packages where possible.

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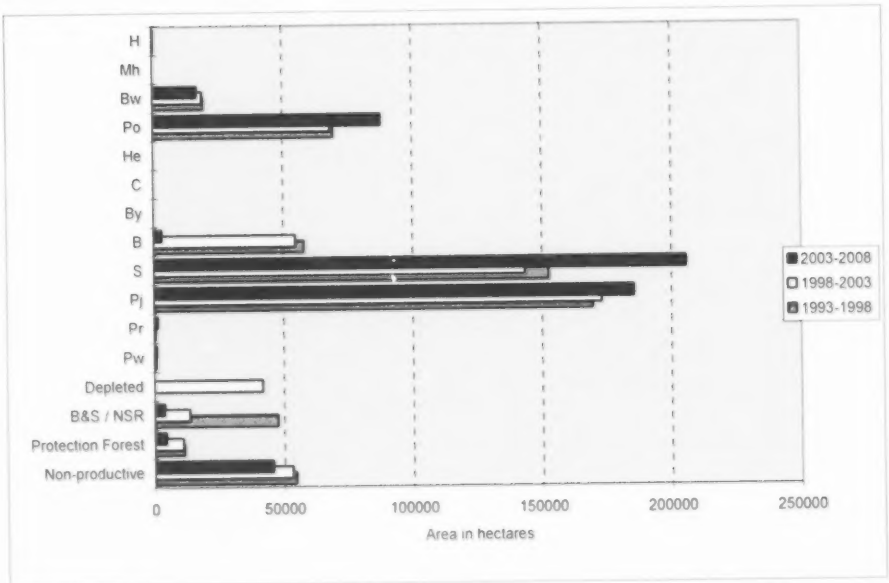
Table 1 - Summary of Total Area Under Management

Past and Current Plans - Crown Managed

MU: Wabigoon Forest

Land Type		Plan Term	Area in hectares		
			Past Plans		Current
			1993-1998	1998-2003	2003-2008
Non-Forested					
Other Land			3,863	3,083	9,796
Forested					
Non-productive			54,646	53,283	45,789
Productive					
Protection			11,555	11,044	4,412
Production Forest					
	B&S / NSR		47,706	13,578	3,840
	Depleted		-	41,878	-
	Forest Stands by Working Group				
	Pw		710	614	987
	Pr		548	618	1,405
	Pj		169,798	173,154	185,625
	S		152,708	143,536	205,772
	B		58,132	54,738	3,169
	By		-	-	-
	Oc		8,488	7,984	11,046
	C		-	-	-
	He		-	-	-
	Po		69,697	68,643	88,043
	Bw		19,550	19,071	17,007
	Mh		-	-	-
	H		421	419	430
Total Production Forest			527,758	524,233	513,484
Total Forested Land			593,959	588,560	563,685



Source: FMPM Table FMP-1, FMP-2
TMPM Table 4.8.2

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Table 2 - DESCRIPTION OF FOREST UNITS (FMP-8)

Table 2a - DESCRIPTION OF FOREST UNITS Plan Term 2003-2008

Forest Unit Code	Forest Unit Name	Forest Type	Main Working Group	Site Type	Silvicultural System	FRI Parameters and Criteria	Additional Information
BwDom	White Birch Dominant	Intolerant Hardwood	White Birch	ES 16, 18, 19, 28, 29	Clearcut	Bw >= 0.6 and Po + Bw >= 0.7	Sort Order 11
CeDry	Cedar Upland	Conifer	Cedar	ES 17, 18, 21, 26, 27	Clearcut	WG = "Ce" and Ce >= 0.4 and Sb + Sw >= 0.4 or Ecosite = 17	Sort Order 6
MxCon	Conifer Mixedwood	Mixed Wood	Poplar	ES 14, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29, 31, 32	Clearcut	(Pr + Pw + Pj + Sb + Sw + Bf + Ce + Lat) > (Po + Bw + Mb + Ub + Ebi) or (Pr + Pw + Pj + Sb + Sw + Bf + Ce + Lat) = (Po + Bw + Mb + Ub + Ebi) & conifer WG	Sort Order 14
MxHwd	Hardwood Mixedwood	Mixed Wood	Poplar	ES 16, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 30, 33	Clearcut	(Po + Bw + Mb + Ub + Ebi) > (Pr + Pw + Pj + Sb + Sw + Bf + Ce + Lat)	Sort Order 15
OCLow	Cedar Lowland	Cedar	Cedar	ES 35, 36, 37, 38	Clearcut	Ecosite = 14 and (Lat + Ce >= 0.5 or WG = "Ce" or WG = "La") Then after sort 6	Sort Order 5 then 7
PjMix	Jack Pine Mixedwood	Mixed Wood	Jack Pine	ES 13, 14, 18, 19, 20, 21, 22, 25, 26	Clearcut	(Pr + Pw + Pj + Sb + Sw + Bf + Ce + Lat) >= 0.5 and Po <= 0.2 and Pj > (Sb + Sw + Bf)	Sort Order 13
PjPrd	Jack Pine Productive	Conifer	Jack Pine	ES 13, 14, 19, 20, 21, 22, 25, 26, 29	Clearcut	Pj >= 0.7 and Po + Bw <= 0.2 and (SC = "X" or SC = "1" or SC = "2")	Sort Order 9
PoAll	Poplar	Intolerant Hardwood	Poplar	ES 16, 18, 19, 21, 23, 25, 26, 28, 29, 33	Clearcut	Po >= 0.7	Sort Order 10
PrwMx	Red / White Pine Mix	Conifer	Red Pine	ES 11, 12, 15, 18, 24	Clearcut	Pr + Pw >= 0.4	Sort Order 2
PwDom	White Pine Dominant	Conifer	White Pine	ES 18	Clearcut	Pw >= 0.4	Sort Order 1
SbLow	Black Spruce Lowland	Conifer	Spruce Black	ES 35, 36, 37, 38	Clearcut	Sb >= 0.5 and (Ecosite = 34)	Sort Order 4
SbMix	Spruce Mixedwood	Mixed Wood	Spruce Black	ES 13, 14, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29, 31, 32	Clearcut	(Pr + Pw + Pj + Sb + Sw + Bf + Ce + Lat) >= 0.5 and Po <= 0.2 and (Sb + Sw + Bf) > Pj	Sort Order 12
SbPrd	B. Spruce Productive	Conifer	Spruce Black	ES 13, 14, 20, 21, 22, 25, 26, 27, 31, 32	Clearcut	Sb + Sw >= 0.7 and Po + Bw <= 0.2 and (SC = X, 1, or 2)	Sort Order 8
SbAll	All Shallow Sites	Conifer	Jack Pine	ES 11, 12	Clearcut	Ecosite = 11 or 12	Sort Order 3

Table 2b - DESCRIPTION OF FOREST UNITS Plan Term 1998-2003

Forest Unit Code	Forest Unit Name	Forest Type	Main Working Group	Site Type	Silvicultural System	FRI Parameters and Criteria	Additional Information
Sp1	Spruce Upland	Conifer	Sb		Clearcut	wg = Sb or wg = Sw and Site = X, 1, 2	X, 1, 2 were aggregated due to the small amount of site class X and 2. White spruce also included due to small amount of White spruce working group
Sp3	Spruce Lowland	Conifer	Sb		Clearcut	wg = Sb or Sw and site = 3,4	Site class 4 is included for tracking purposes as SFMM model input, but not used to calculate managed /available forest area
Pj2	Pj Productive	Conifer	Pj		Clearcut	wg Pj and Site = X, 1, 2	X, 1, 2 were aggregated due to the small amount of site class X and 1 and the similarity of stand development. site class 4 included for tracking purposes as SFMM model input, but is not used to calculate managed available forest area
Pj3	Pj Shallow Soils	Conifer	Pj		Clearcut	wg = Pj and site 3, 4	
Bf	Bf All sites	Conifer	B		Clearcut	wg = Bf	
Po2	Po Productive	INTHWD	Po		Clearcut	Wg Po Site x, 1, 2	X, 1, 2 were aggregated due to the small amount of site class X and 1 and the similarity of stand development. site class 4 included for tracking purposes as SFMM model input, but is not used to calculate managed available forest area
Po3	Po Shallow Soils	INTHWD	Po		Clearcut	Wg = Po Site 3, 4	
Bw	Bw all sites	INTHWD	Bw		Clearcut		
Pw	Pw all sites	Conifer	Pw		Shelterwood	wg= Pw or Pw = 10%+ and site = 3,4, or Pw >20%+ and site x, 1, 2	stands contain 10 to 20%+ white pine trees will be managed for white pine if the trees are clumped spatially
Pr	Pr all site	Conifer	Pr		Clearcut	Pr = 20%+ and site x, 1, 2	Stands containing 10-20%+ red pine will be managed for Red Pine if the trees are clumped spatially
Oh	Other hardwoods	TOLHWD	OH		Clearcut	wg AB or Ms or oh	
OC	Other conifer	Conifer	OC		Clearcut	wg os or sc or la	

Table 2c - DESCRIPTION OF FOREST UNITS Plan Term 1993-1998

Forest Unit Code	Forest Unit Name	Forest Type	Main Working Group	Site Type	Silvicultural System	FRI Parameters and Criteria	Additional Information
Bf40	All Bf	Conifer	B				
BW	All Wb	Intlwd	Bw				
OC0	All other conifer	Conifer	OC				
Pj40	All Pj	Conifer	Pj				
Po40	All Po	Intlwd	Po				
Pw40	All Pw	Conifer	Pw				
Sp40	All Sp	Conifer	Sp				

2005 Independent Forest Audit

Table 3 - Summary of Planned & Actual Harvest Volumes

MU: Wabigoon Forest

Average Planned Annual Harvest Volumes

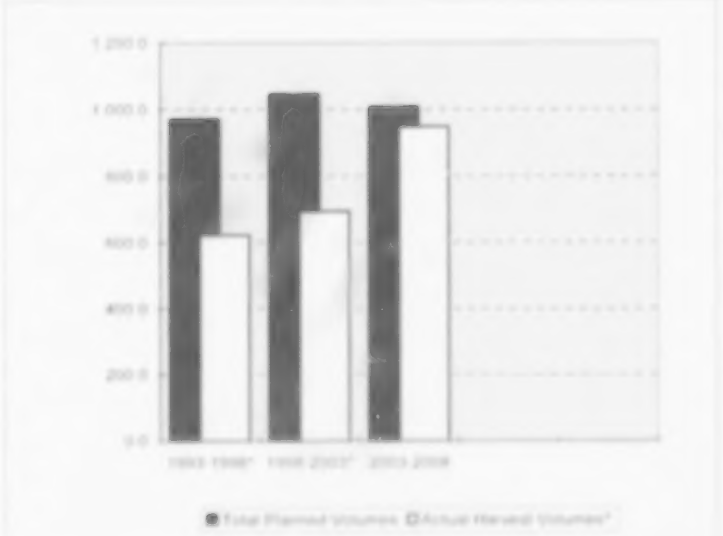
Volumes are Annualized for the indicated 5 year period

	Volume in '000's cubic metres		
	Past Plans		Current
Species	1993-1998	1998-2003	2003-2008
B	40457	80836	35822
BW	35258	37021	27382
OC	8793	6361	3780
OH	0	1294	0
PJ	408281	368388	303534
PO	197866	198118	289933
PR	1327	3406	777
PW	6328	2086	44
S	262269	346690	344857
Total Planned Volumes	**969579**	**1044200**	**1006129**

Actual Harvest Volumes

Volumes are Annualized for the indicated 5 year period

	Volume in '000's cubic metres		
	Past Plans		Current
Species	1993-1998	1998-2003	2003-2008
B	31470	39774	5117
BW	439	17984	3
OC	117	994	308
OH	0	17507	4
PJ	318209	285509	359901
PO	80711	44999	215739
PR	457	915	0
PW	0	0	2
S	191170	286570	367469
Total Actual Volumes	**622572**	**694252**	**948542**



Source: planned: FMPM Table # 10.1 FMPM Table FMP-21
actual: FMPM Table # 2.1 FMPM SFI O.R. annual reports

MANAGEMENT UNIT NAME: Wabigoon Forest
RPFO TERM: April 1, 1998 to March 31, 2003

Table 4 - SUMMARY REPORT OF DEPLETION AREA: COMPARISON TO THE SELECTED MANAGEMENT ALTERNATIVE

Table 4a - SUMMARY REPORT OF DEPLETION AREA: COMPARISON TO THE SELECTED MANAGEMENT ALTERNATIVE 2003-2008 term
Volumes are Annualized for the indicated 5 year period

Forest Unit	Harvest and Bypass			Reserves			**Fire		**Insects		**Other		Total		
	Available Harvest Area (ha)	Planned (ha)	Actual (ha)	Projected (ha)	Planned (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Planned (ha)	Actual (ha)
BwDom	4.86	1.12	6	3.16	17.82	0	0	0	0	0	0	0	8.02	18.94	6
CeDry	0	0	2.1	0.62	5.4	0	0	0	0	0	0	0	0.62	5.4	2.1
MxCon	660.88	640.46	541.8	95.62	61.7	36.8	0	0	0	0	0	0	756.5	702.16	578.6
MxHwd	1279.3	1290.1	1265.8	166.76	267.72	81.9	0	0	0	0	0	0	1446.06	1557.82	1347.7
OcLow	0	0	7.1	5.16	12.68	0	0	0	0	0	0	0	5.16	12.68	7.1
PjMx	902.9	897.12	914.2	110.72	111.76	87.6	0	0	0	0	0	0	1011.62	1008.9	1001.8
PjPrd	564.06	560.52	622.5	46.54	51.8	21.1	0	0	0	0	0	0	610.6	612.32	643.6
PoAsl	297.14	292.72	228.3	38.36	55.98	21.1	0	0	0	0	0	0	335.5	348.7	249.4
PwMx	28.2	9.6	0	3.4	3.28	0	0	0	0	0	0	0	31.6	8.88	0
PwDom	0	0	0	0	0.82	0	0	0	0	0	0	0	0	0.82	0
SbLow	300	296.88	182.3	55.86	36.42	18.9	0	0	0	0	0	0	355.86	333.3	201.2
SbMx	1015.7	1007.38	859.9	142.62	237.3	82.3	0	0	0	0	0	0	1158.32	1244.68	942.2
SbPrd	1045.46	1027.24	956.4	91.26	123.08	81.1	0	0	0	0	0	0	1136.72	1150.32	1037.5
ShAsl	400	387.34	89.3	35.54	66.56	6.2	0	0	0	0	0	0	435.54	453.9	95.5
Total	6496.5	6408.48	5875.1	795.62	1052.34	437	0	0	0	0	0	0	7292.12	7458.82	6312.1

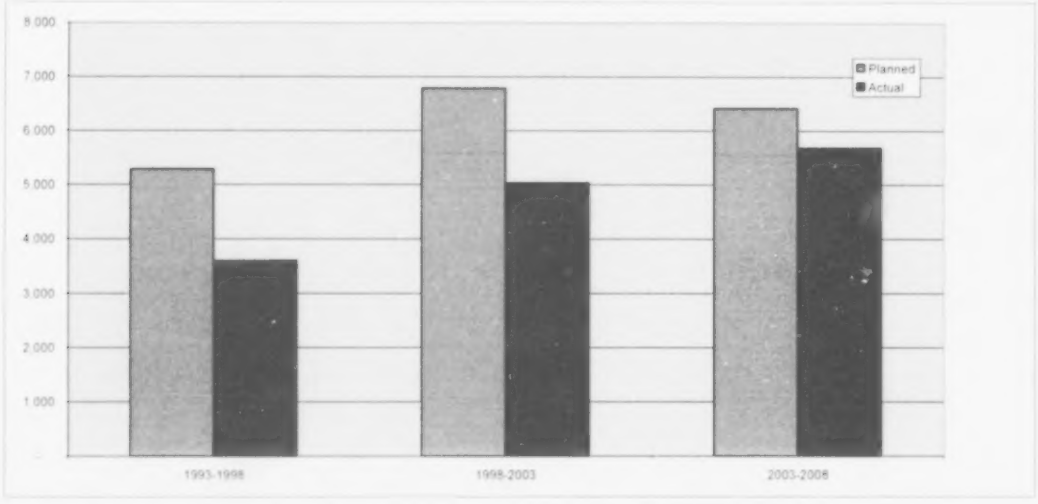
Table 4b - SUMMARY REPORT OF DEPLETION AREA: COMPARISON TO THE SELECTED MANAGEMENT ALTERNATIVE 1998-2003 term
Volumes are Annualized for the indicated 5 year period

Forest Unit	Harvest and Bypass			Reserves			**Fire		**Insects		**Other		Total		
	Available Harvest Area (ha)	Planned (ha)	Actual (ha)	Projected (ha)	Planned (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Planned (ha)	Actual (ha)
Sp1	2248.18	2213.58	1572.552	222.34	218.54	181.22	0	0	0	0	0	28.99	2470.52	2432.12	1782.752
Sp3	67.74	43.52	22.52	41.52	2	1.54	0	0	0	0	0	0.68	109.26	45.52	24.74
Pj2	1402.38	1359.72	1165.38	128.8	154	133.9	0	0	0	0	0	0	1531.18	1513.72	1299.28
Pj3	1172.7	1178.52	1009.5	130.3	134.04	109.5	0	0	0	0	0	12.88	1303	1312.56	1131.88
Bf	500	795.54	355.26	61.8	96.24	44.26	0	0	0	0	0	1.8	561.8	891.78	401.32
Pu2	1133	239.74	172.42	25.18	23.28	17.74	0	0	0	0	0	2.34	1158.18	263.02	192.5
Pu3	579.96	645.9	502.48	64.44	63	54.32	0	0	0	0	0	0	644.4	708.9	556.8
Sw	260	242.14	208.74	22.22	23.96	22.78	0	0	0	0	0	4.96	282.22	266.1	236.48
Pw	42.58	1.12	1.16	5.26	0.24	0	0	0	0	0	0	0	47.84	1.36	1.16
Pr	37.66	27.12	14.8	4.66	4.56	1.22	0	0	0	0	0	0.78	42.32	31.68	16.8
OH	1.56	3.14	1.7	0.98	0	0	0	0	0	0	0	0	2.54	3.14	1.7
OC	37.96	33.48	1.7	23.26	4.26	0	0	0	0	0	0	0	61.22	37.74	1.7
Total	7423.74	6783.52	5029.232	730.74	724.12	566.48	0	0	0	0	0	52.42	8154.48	7507.64	5647.132

Table 4c - SUMMARY REPORT OF DEPLETION AREA: COMPARISON TO THE SELECTED MANAGEMENT ALTERNATIVE 1993-1998 term
Volumes are Annualized for the indicated 5 year period

Forest Unit	Harvest and Bypass			Reserves			**Fire		**Insects		**Other		Total		
	Available Harvest Area (ha)	Planned (ha)	Actual (ha)	Projected (ha)	Planned (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Actual (ha)	Projected (ha)	Planned (ha)	Actual (ha)
SP0	1807.4	1603.2	971.8			79.4	0	1.4	0	0	0	55	1807.4	1603.2	1006.6
BF0	1253.6	282.2	96.4			103.6	0	0.4	0	0	0	9.4	1253.6	282.2	211.8
PJ0	2599.2	2586.2	2193.4			80.6	0	10	0	0	0	13.4	2599.2	2586.2	2679.4
PO0	968.2	711	362.8			180.8	0	0	0	0	0	0	968.2	711	543.6
BW0	311	85.2	40.6			21.2	0	0	0	0	0	1	311	85.2	62.8
PW0	14.4	10	1.8			0	0	0	0	0	0	0	14.4	10	1.8
OC0	212.8	103.6	33.4			21.8	0	0	0	0	0	1.6	212.8	103.6	53.8
Total	7170.6	5381.4	3700.2	0	0	610.4	0	14.8	0	0	0	79.4	7176.6	5381.4	4559.8

*Source FMP tables 18, 19 from plan term as of amendment #24
**Breakdown occurred in Year -of the plan term and is recorded



2005 Independent Forest Audit

Table 5a - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT (FMP-9) 2003-2008 TERM

MU: 130 Wabigoon Forest

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of Management	Available	
		Area (ha)	Volume (m3)	Area (ha)	Volume (m3)		Area (ha)	Volume (m3)
BWDOM	B&S		0	0	0	clearcut	62	0
	1-20		0	223	668	clearcut	58	174
	21-40		0	0	5	clearcut	170	4,675
	41-60		0	0	32	clearcut	695	74,018
	61-80		0	121	21,252	clearcut	1,278	223,906
	81-100		0	80	12,080	clearcut	551	83,311
	101-120	11	1,259	19	2,211	clearcut	78	9,181
	121-140		0	0	41	clearcut	10	820
	141 +		0	0	0	clearcut	0	0
	Forest Unit Subtotal	11	1,259	444	36,288		2,902	396,084
CEDRY	B&S		0	0	0	clearcut	18	0
	1-20		0	1	0	clearcut	2	0
	21-40		0	9	71	clearcut	121	968
	41-60		0	44	1,159	clearcut	256	6,784
	61-80	8	447	292	16,617	clearcut	818	46,626
	81-100	25	2,038	465	38,349	clearcut	1,730	142,552
	101-120	11	1,065	311	29,153	clearcut	624	58,406
	121-140	22	1,693	79	6,013	clearcut	375	28,500
	141 +	6	326	80	4,002	clearcut	378	19,008
	Forest Unit Subtotal	73	5,570	1,281	95,363		4,322	302,844
MXCON	B&S		0	0	0	clearcut	0	0
	1-20		0	358	1,252	clearcut	2,894	10,129
	21-40	32	1,407	619	27,256	clearcut	10,161	447,084
	41-60		0	937	111,969	clearcut	7,535	900,809
	61-80	9	1,486	1,882	329,655	clearcut	9,816	1,713,874
	81-100	15	2,923	1,499	286,961	clearcut	6,424	1,230,453
	101-120	8	1,574	864	160,692	clearcut	2,468	459,048
	121-140	29	4,747	304	52,033	clearcut	747	127,737
	141 +		0	13	1,802	clearcut	42	5,718
	Forest Unit Subtotal	92	12,136	6,476	970,946		40,087	4,894,852

MXHWD	B&S		0	0	0	clearcut	0	0
	1-20		0	1,404	4,213	clearcut	1,923	5,769
	21-40	59	3,103	0	14	clearcut	13,895	729,488
	41-60	111	14,217	2,618	336,429	clearcut	18,271	2,347,824
	61-80	343	60,346	4,269	750,104	clearcut	22,158	3,893,161
	81-100	184	34,990	993	188,610	clearcut	5,246	996,845
	101-120	211	37,782	723	129,480	clearcut	2,760	494,040
	121-140	134	21,843	111	18,075	clearcut	741	120,413
	141 +		0	0	0	clearcut	78	9,643
	Forest Unit Subtotal	1,043	172,281	10,119	1,426,924		65,072	8,597,181
OCLOW	B&S		0	0	0	clearcut	199	0
	1-20		0	297	2,225	clearcut	360	2,700
	21-40		0	79	3,536	clearcut	760	34,200
	41-60		0	79	5,937	clearcut	557	41,775
	61-80	9	829	287	25,386	clearcut	1,448	128,206
	81-100	48	4,448	495	46,074	clearcut	2,615	243,195
	101-120	102	9,155	198	17,806	clearcut	1,085	97,650
	121-140	94	8,097	124	10,676	clearcut	575	49,393
	141 +	68	4,899	42	3,009	clearcut	219	15,684
	Forest Unit Subtotal	322	27,427	1,601	114,651		7,818	612,802
PJMIX	B&S		0	0	0	clearcut	0	0
	1-20		0	961	2,883	clearcut	12,853	38,559
	21-40	6	155	1,316	37,165	clearcut	15,628	441,413
	41-60		0	400	38,210	clearcut	4,083	389,927
	61-80	34	5,970	2,469	429,658	clearcut	13,852	2,410,248
	81-100	69	13,067	1,508	284,936	clearcut	8,269	1,562,841
	101-120	9	1,565	1,377	245,741	clearcut	2,263	403,946
	121-140	9	1,616	373	64,564	clearcut	953	164,869
	141 +		0	0	46	clearcut	12	1,853
	Forest Unit Subtotal	127	22,374	8,404	1,103,202		57,913	5,413,655
PJPRD	B&S		0	0	0	clearcut	127	0
	1-20		0	1,136	0	clearcut	35,152	0
	21-40		0	1,058	30,582	clearcut	15,198	439,222
	41-60		0	142	14,174	clearcut	2,261	225,535
	61-80	4	714	929	174,671	clearcut	6,904	1,297,952
	81-100	16	3,232	874	176,588	clearcut	5,873	1,186,346
	101-120		0	312	60,209	clearcut	652	125,660
	121-140		0	45	6,991	clearcut	108	16,891
	141 +		0	0	0	clearcut	0	0
	Forest Unit Subtotal	20	3,946	4,497	463,216		66,275	3,291,606
POALL	B&S		0	0	0	clearcut	134	0
	1-20		0	387	3,098	clearcut	2,173	17,384
	21-40		0	0	0	clearcut	1,892	133,365
	41-60	6	11,088	0	49	clearcut	2,205	361,620
	61-80	5	11,388	397	80,392	clearcut	3,780	765,828
	81-100	2	3,939	149	27,751	clearcut	1,408	262,592
	101-120	7	10,931	120	17,026	clearcut	633	89,886
	121-140		0	37	3,725	clearcut	267	27,101
	141 +		0	0	29	clearcut	4	387
	Forest Unit Subtotal	22	37,346	1,090	132,070		12,496	1,658,162
PRWMX	B&S		0	0	0	clearcut	0	0
	1-20		0	4	28	clearcut	570	4,275
	21-40		0	0	12	clearcut	30	1,740
	41-60		0	30	4,012	clearcut	49	6,664
	61-80	4	857	88	17,404	clearcut	210	41,391
	81-100	3	1,167	143	30,545	clearcut	265	56,763
	101-120		0	43	9,522	clearcut	151	33,673
	121-140		0	6	1,238	clearcut	10	2,250
	141 +		0	21	4,391	clearcut	15	3,182
	Forest Unit Subtotal	11	2,025	333	67,151		1,300	149,938

PWDOM	B&S		0	0	0	clearcut	0	0
	1-20		0	13	83	clearcut	128	832
	21-40		0	0	0	clearcut	0	0
	41-60		0	0	0	clearcut	0	0
	61-80		0	10	1,614	clearcut	19	3,097
	81-100	10	1,998	4	824	clearcut	128	24,525
	101-120	14	2,762	64	12,593	clearcut	210	41,517
	121-140	9	1,747	40	7,861	clearcut	101	20,049
	141 +	9	1,776	43	8,641	clearcut	64	12,901
	Forest Unit Subtotal	42	8,283	173	31,616		650	102,920
SBLOW	B&S		0	0	0	clearcut	2,122	0
	1-20		0	310	0	clearcut	941	0
	21-40		0	0	0	clearcut	1,399	4,196
	41-60	58	1,042	90	1,615	clearcut	2,309	41,562
	61-80	129	7,868	780	47,580	clearcut	6,540	398,940
	81-100	383	36,615	1,130	108,028	clearcut	8,985	858,966
	101-120	544	54,788	945	95,239	clearcut	7,042	709,482
	121-140	252	23,665	509	47,837	clearcut	3,484	327,496
	141 +	196	15,662	242	19,328	clearcut	1,664	133,120
	Forest Unit Subtotal	1,561	139,640	4,005	319,626		34,486	2,473,762
SBMIX	B&S		0	0	0	clearcut	19	0
	1-20		0	1,170	4,095	clearcut	3,803	13,311
	21-40	6	206	0	0	clearcut	6,101	219,636
	41-60	41	4,485	2,182	239,846	clearcut	17,424	1,914,898
	61-80	170	29,110	5,394	922,213	clearcut	26,869	4,594,223
	81-100	80	14,098	4,332	765,212	clearcut	20,342	3,593,414
	101-120	43	6,813	1,638	260,035	clearcut	5,396	856,885
	121-140	48	7,273	643	98,361	clearcut	1,597	244,181
	141 +	19	2,496	55	7,094	clearcut	362	47,060
	Forest Unit Subtotal	406	64,482	15,413	2,296,856		81,913	11,483,607
SBPRD	B&S		0	0	0	clearcut	524	0
	1-20		0	198	494	clearcut	7,496	18,740
	21-40		0	74	2,108	clearcut	1,015	29,029
	41-60	12	1,029	370	31,384	clearcut	4,631	392,709
	61-80	47	7,014	1,417	210,805	clearcut	11,319	1,684,267
	81-100	27	4,515	1,385	230,691	clearcut	11,692	1,947,887
	101-120		0	273	42,350	clearcut	2,361	365,719
	121-140	10	1,412	107	15,494	clearcut	948	136,891
	141 +		0	15	1,741	clearcut	160	18,560
	Forest Unit Subtotal	96	13,970	3,839	535,067		40,146	4,593,802
SHALL	B&S		0	0	0	clearcut	635	0
	1-20		0	355	1,917	clearcut	5,227	28,224
	21-40	84	4,044	2,172	104,266	clearcut	17,830	855,845
	41-60	32	3,578	461	51,149	clearcut	3,478	386,058
	61-80	93	11,881	745	95,398	clearcut	5,484	701,952
	81-100	154	17,610	488	55,575	clearcut	4,198	478,572
	101-120	25	2,429	461	45,590	clearcut	1,911	189,189
	121-140		0	378	34,776	clearcut	421	38,732
	141 +		0	13	741	clearcut	16	912
	Forest Unit Subtotal	388	39,542	5,072	389,411		39,200	2,679,484
TOTAL ALL FOREST UNITS		4,412	550,282	62,747	7,982,041		454,579	46,650,701
TOTAL PRODUCTIVE FOREST							521,738	

Source:
TMPM Table 4.8.2, 4.9
FMPM Table FMP-9

2005 Independent Forest Audit

Table 5b - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT (FMP-9) 1998-2003 TERM

MU: 130 Wabigoon Forest

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of Management	Available	
		(ha)	(000's m³)	(ha)	(000's m³)		(ha)	(000's m³)
Sp1	1-10	0	0	0	0		277	0
	11-20	11	0	0	0		1575	0
	21-30	26	0.26	0	0	Thin	5791	57.91
	31-40	98	30332	0	0	Thin	7247	246.398
	41-50	276	17.112	0	0		11687	724.594
	51-60	259	22.533	0	0		7071	615.177
	61-70	298	33.078	0	0		13022	1445.442
	71-80	1213	157.69	0	0		17826	2317.38
	81-90	665	96425	0	0		24857	3604.265
	91-100	367	57619	0	0		12026	1888.082
	101-110	662	109.23	0	0		13270	2189.55
	111-120	427	68.747	0	0		6887	1108.807
	121-130	284	40.328	0	0		6149	873.158
	131-140	312	37.44	0	0		2845	341.4
	141-150	61	6.527	0	0		1689	180.723
	151-160	16	1.616	0	0		947	95.647
	161-170	21	2.037	0	0		497	48.209
	171-180	15	1.38	0	0		114	10.488
	181-190	20	1.7	0	0		92	7.82
	191-200	0	0	0	0		73	5.767
	201-210	0	0	0	0		61	0.061
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Sp1		5031	657	0	0		134003	15760.878
Sp3	1-10	1197	0	0	0		82	0
	11-20	18	0	0	0		128	0
	21-30	0	0	0	0		0	0
	31-40	0	0	0	0		120	0
	41-50	0	0	0	0		62	0
	51-60	0	0	0	0		6	0.006
	61-70	85	0.085	0	0		175	0.175
	71-80	45	0.18	0	0		258	1.032
	81-90	151	3.775	0	0		467	11.675
	91-100	188	6.956	0	0		860	31.82
	101-110	380	19	0	0		643	32.15
	111-120	442	26.52	0	0		1107	66.42
	121-130	390	24.18	0	0		1284	79.608
	131-140	616	38.808	0	0		1266	79.758
	141-150	453	27.18	0	0		610	36.6
	151-160	103	5.768	0	0		337	18.872
	161-170	123	6.519	0	0		156	8.268
	171-180	0	0	0	0		89	4.45
	181-190	8	0.368	0	0		129	5.934
	191-200	6	0	0	0		8	0.248
	201-210	0	0	0	0		52	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Sp3		4199	159	0	0		7833	377.034

Pj2	1-10	2	0	0	0		4076	0
	11-20	140	0	0	0		10816	0
	21-30	102	1.836	0	0	Thin	40404	727.272
	31-40	57	30.78	0	0	Thin	9139	493.506
	41-50	26	2.21	0	0		1969	167.365
	51-60	82	8.938	0	0		1700	185.3
	61-70	217	28.427	0	0		4259	557.929
	71-80	1044	152.424	0	0		9349	1364.954
	81-90	832	130.624	0	0		12424	1950.568
	91-100	329	53.627	0	0		2213	353.873
	101-110	343	55.909	0	0		2303	360.719
	111-120	194	28.712	0	0		1709	340.844
	121-130	73	7.738	0	0		1168	181.154
	131-140	57	3.249	0	0		35	66.576
	141-150	0	0	0	0		11	1.155
	151-160	0	0	0	0		155	0.286
	161-170	0	0	0	0		0	3.875
	171-180	0	0	0	0		0	0
	181-190	0	0	0	0		0	0
	191-200	0	0	0	0		0	0
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Pj2		3498	476.772	0	0		103901	6755.376
Pj3	1-10	2	0	0	0		3011	0
	11-20	42	0	0	0		8311	0
	21-30	109	0	0	0		1103	0
	31-40	35	0.735	0	0		2616	54.936
	41-50	16	0.768	0	0		1170	56.16
	51-60	215	15.91	0	0		971	71.854
	61-70	655	59.605	0	0		10054	914.914
	71-80	1451	150.904	0	0		10228	1063.712
	81-90	1227	142.332	0	0		15023	1742.668
	91-100	882	110.25	0	0		3571	446.375
	101-110	823	105.344	0	0		3424	438.272
	111-120	217	24.738	0	0		1062	121.068
	121-130	99	8.118	0	0		1299	106.518
	131-140	51	2.295	0	0		435	19.575
	141-150	0	0	0	0		226	6.102
	151-160	0	0	0	0		0	0
	161-170	1	20	0	0		14	0.28
	171-180	0	0	0	0		0	0
	181-190	0	0	0	0		0	0
	191-200	0	0	0	0		0	0
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Pj3		5825	621.019	0	0		62518	5042.434

Bf	1-10	0	0	0	0		0	0
	11-20	0	0	0	0		27	0.135
	21-30	18	0.342	0	0		415	7.885
	31-40	202	8.08	0	0		4918	196.72
	41-50	1231	71.398	0	0		4037	814.146
	51-60	1744	49.956	0	0		19938	1495.35
	61-70	546	37.224	0	0		12309	1058.574
	71-80	396	10.388	0	0		1859	174.746
	81-90	106	18	0	0		306	29.988
	91-100	180	3.267	0	0		171	17.1
	101-110	33	0.49	0	0		119	11.781
	111-120	5	0	0	0		14	1.372
	121-130	0	0	0	0		0	0
	131-140	0	1.125	0	0		0	0
	141-150	25	0	0	0		0	0
	151-160	0	0	0	0		0	0
	161-170	0	0	0	0		0	0
	171-180	0	0	0	0		0	0
	181-190	0	0	0	0		0	0
	191-200	0	0	0	0		0	0
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Bf		4486	328	0	0		54113	3807.797
Po2	1-10	1	0	0	0		472	0
	11-20	0	0	0	0		1721	0
	21-30	111	1.776	0	0	Thin	11938	191.008
	31-40	0	0	0	0	Thin	3288	157.824
	41-50	1	0.074	0	0		1709	126.466
	51-60	76	7.372	0	0		938	90.986
	61-70	60	7.14	0	0		681	81.039
	71-80	105	14.385	0	0		613	83.981
	81-90	104	15.496	0	0		1062	158.238
	91-100	84	13.188	0	0		1381	216.817
	101-110	86	13.502	0	0		1676	263.132
	111-120	41	5.658	0	0		802	110.676
	121-130	0	0	0	0		789	69.432
	131-140	0	0	0	0		362	15.928
	141-150	0	0	0	0		0	0
	151-160	0	0	0	0		0	0
	161-170	0	0	0	0		0	0
	171-180	0	0	0	0		0	0
	181-190	0	0	0	0		0	0
	191-200	0	0	0	0		0	0
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Po2		669	78.591	0	0		27432	1565.527

Po3	1-10	0	0	0	0		2033	0
	11-20	0	0	0	0		1239	0
	21-30	357	0.357	0	0		4302	4.302
	31-40	53	0.954	0	0		4210	75.78
	41-50	84	3.78	0	0		1068	48.06
	51-60	351	23.868	0	0		2026	137.768
	61-70	1878	155.874	0	0		5907	490.281
	71-80	1129	102.739	0	0		4751	432.341
	81-90	1417	145.951	0	0		5117	527.051
	91-100	717	78.153	0	0		2851	310.759
	101-110	472	52.392	0	0		4422	490.842
	111-120	214	20.544	0	0		1228	117.888
	121-130	24	1.44	0	0		547	32.82
	131-140	0	0	0	0		100	3
	141-150	0	0	0	0		0	0
	151-160	0	0	0	0		0	0
	161-170	0	0	0	0		0	0
	171-180	0	0	0	0		0	0
	181-190	0	0	0	0		0	0
	191-200	0	0	0	0		0	0
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Po3		6696	586.052	0	0		39801	2670.892
Bw	1-10	0	0	0	0		17	0
	11-20	0	0	0	0		380	0
	21-30	1	0	0	0		768	0
	31-40	9	0.135	0	0		1368	20.52
	41-50	37	1.517	0	0		993	40.713
	51-60	389	23.729	0	0		1129	68.869
	61-70	272	20.128	0	0		3847	284.678
	71-80	456	37.392	0	0		4321	354.322
	81-90	215	20.425	0	0		2497	237.215
	91-100	144	14.112	0	0		1370	134.26
	101-110	114	11.628	0	0		890	90.78
	111-120	0	0	0	0		116	11.02
	121-130	0	0	0	0		185	13.505
	131-140	0	0	0	0		93	4.371
	141-150	0	0	0	0		99	2.772
	151-160	0	0	0	0		0	0
	161-170	0	0	0	0		0	0
	171-180	0	0	0	0		0	0
	181-190	0	0	0	0		0	0
	191-200	0	0	0	0		0	0
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Sutotal Bw		1637	129.066	0	0		0	0

Pr	1-10	0	0	0	0		224	0
	11-20	0	0	0	0		214	0
	21-30	0	0	0	0		0	0
	31-40	0	0	0	0		27	1.161
	41-50	0	0	0	0		10	0.71
	51-60	76	6.916	0	0		152	13.832
	61-70	0	0	0	0		286	33.176
	71-80	27	3.591	0	0		266	35.378
	81-90	173	25.777	0	0		235	35.015
	91-100	76	12.008	0	0		352	55.616
	101-110	83	13.363	0	0		519	83.559
	111-120	98	15.386	0	0		205	32.185
	121-130	40	5.4	0	0		237	31.995
	131-140	43	4.859	0	0		99	11.187
	141-150	0	0	0	0		74	7.4
	151-160	0	0	0	0		48	4.512
	161-170	0	0	0	0		3	0.276
	171-180	0	0	0	0		0	0
	181-190	0	0	0	0		0	0
	191-200	0	0	0	0		2	0.76
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Pr		616	87.3	0	0		2953	346.178
Pw	1-10	0	0	0	0		0	0
	11-20	0	0	0	0		8	0
	21-30	0	0	0	0		0	0
	31-40	0	0	0	0		0	0
	41-50	0	0	0	0		9	0.495
	51-60	76	6.156	0	0		405	32.805
	61-70	49	5.439	0	0		220	24.42
	71-80	112	14.784	0	0		150	19.8
	81-90	140	21.28	0	0		745	113.24
	91-100	85	14.28	0	0		433	72.744
	101-110	59	10.561	0	0		300	53.7
	111-120	0	0	0	0		139	24.603
	121-130	10	1.63	0	0		66	10.758
	131-140	0	0	0	0		19	2.831
	141-150	0	0	0	0		47	6.533
	151-160	0	0	0	0		29	3.915
	161-170	8	1.064	0	0		144	19.152
	171-180	38	4.978	0	0		65	8.515
	181-190	0	0	0	0		0	0
	191-200	94	11.938	0	0		50	6.35
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal Pw		671	92.11				2829	346.861

OH	1-10	0	0	0	0		0	0
	11-20	0	0	0	0		0	0
	21-30	0	0	0	0		0	0
	31-40	0	0	0	0		0	0
	41-50	0	0	0	0		0	0
	51-60	0	0	0	0		27	1.08
	61-70	0	0	0	0		93	5.022
	71-80	0	0	0	0		97	6.499
	81-90	35	2.905	0	0		84	6.972
	91-100	8	0.744	0	0		27	2.511
	101-110	70	7.14	0	0		22	2.244
	111-120	9	0.927	0	0		61	6.283
	121-130	4	0.38	0	0		0	0
	131-140	6	0.504	0	0		0	0
	141-150	0	0	0	0		0	0
	151-160	75	5.7	0	0		0	0
	161-170	0	0	0	0		3	0.219
	171-180	0	0	0	0		0	0
	181-190	0	0	0	0		0	0
	191-200	0	0	0	0		5	0.34
	201-210	0	0	0	0		0	0
	211-220	0	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal OH		207	18.3				419	31.17
OC	1-10	0	0	0	0		0	0
	11-20	0	0	0	0		0	0
	21-30	0	0	0	0		0	0
	31-40	0	0	0	0		40	0.08
	41-50	1	0.005	0	0		32	0.16
	51-60	0	0	0	0		88	0.792
	61-70	0	0	0	0		31	0.372
	71-80	10	015	0	0		241	3.615
	81-90	18	072	0	0		544	21.76
	91-100	30	147	0	0		599	29.351
	101-110	130	767	0	0		1073	63.307
	111-120	166	10.92	0	0		1405	87.11
	121-130	69	3.95	0	0		829	45.595
	131-140	274	12.78	0	0		923	43.381
	141-150	108	4.44	0	0		678	29.154
	151-160	60	28	0	0		293	11.134
	161-170	142	5.54	0	0		617	22.829
	171-180	28	0.52	0	0		99	3.366
	181-190	65	21	0	0		69	2.346
	191-200	0	0	0	0		66	2.112
	201-210	0	0	0	0		0	0
	211-220	25	0	0	0		0	0
	221-230	0	0	0	0		0	0
	231-240	0	0	0	0		0	0
	241-250	0	0	0	0		0	0
	251-260	0	0	0	0		0	0
	261+	0	0	0	0		0	0
Subtotal OC		1126	632	0	0		7627	366.464
TOTAL		34661	3785.33	0	0		461508	38386618

Source:
TMPM Table 4.8.2, 4.9
FMPM Table FMP-9

2005 Independent Forest Audit

Table 5c - SUMMARY OF MANAGED PRODUCTIVE FOREST BY WORKING GROUP (Table 4.8.2 & 4.9) 1993-1998 TERM

MU: 130 Wabigoon Forest

TABLE 4 8 2
AREA SUMMARY OF ALL CROWN LAND

For the Five Year Term
From April 1, 1993 to March 31, 1998

SUMMARY		
WATER		112359
NON-FORESTED LAND		3863
FORESTED LAND		
NON-PRODUCTIVE	54646	
PRODUCTIVE	539313	
		593959
TOTAL AREA		710181

SUMMARY OF PRODUCTIVE FOREST (HECTARES)							
WORKING GROUP	PROTECTION FOREST (SC 4 & ISLANDS)	PRODUCTION FOREST					TOTAL
		B&S and/or NSR	FTG LAND BASE			SUBTOTAL	
			PFR	REGULAR	SUBTOTAL		
PW	0	43	0	709	709	752	752
PR	0	26	112	443	555	581	581
PJ	2930	28910	29099	142340	171439	200349	203279
SB	3003	13211	7659	138027	145686	158897	161900
SW	0	58	43	1730	1773	1831	1831
BF	24	640	1332	56746	58078	58718	58742
CE	817	321	26	7863	7889	8210	9027
TA	82	0	0	426	426	426	508
AS	131	0	0	199	199	199	330
PO	3649	3099	6436	63393	69829	72928	76577
BW	919	384	1634	17907	19541	19925	20844
SP	0	14	86	4620	4706	4720	4720
MS	0	0	28	194	222	222	222
TOTAL	11555	46706	46455	434597	481052	527758	539313

NOTE: Table includes crown land only (ownership class 1) without exclusions. Depletions were moved to B&S, and FTG was moved from B&S to Regular

TABLE 4 9
SUMMARY OF CROWN PRODUCTION FOREST AREA
BY WORKING GROUP BY AGE CLASS
For the Five Year Term
From April 1, 1993 to March 31, 1998

WORKING GROUP	AGE CLASS	AREA (HECTARES)
ASH	B&S	0
	1 TO 20	0
	21 TO 40	0
	41 TO 60	10
	61 TO 80	64
	81 TO 100	40
	101 TO 120	77
	121+	8
TOTAL AS WORKING GROUP		199

BALSAM FIR	B&S	729
	1 TO 20	174
	21 TO 40	11644
	41 TO 60	39979
	61 TO 80	5604
	81 TO 100	486
	101 TO 120	191
	121+	0
TOTAL BF WORKING GROUP		58807
WHITE BIRCH	B&S	435
	1 TO 20	836
	21 TO 40	2033
	41 TO 60	3641
	61 TO 80	8437
	81 TO 100	3356
	101 TO 120	901
	121+	294
TOTAL BW WORKING GROUP		19933
CEDAR	B&S	366
	1 TO 20	0
	21 TO 40	37
	41 TO 60	138
	61 TO 80	718
	81 TO 100	1572
	101 TO 120	2146
	121+	3278
TOTAL CE A WORKING GROUP		8255
SOFT MAPLE	B&S	0
	1 TO 20	0
	21 TO 40	0
	41 TO 60	65
	61 TO 80	157
	81 TO 100	0
	101 TO 120	0
	121+	0
TOTAL MS WORKING GROUP		222
JACK PINE	B&S	32851
	1 TO 20	42823
	21 TO 40	22926
	41 TO 60	11325
	61 TO 80	54008
	81 TO 100	23452
	101 TO 120	7580
	121+	3728
TOTAL PJ WORKING GROUP		198693
POPLAR	B&S	3519
	1 TO 20	10612
	21 TO 40	16719
	41 TO 60	8582
	61 TO 80	12247
	81 TO 100	12634
	101 TO 120	7684
	121+	1023
TOTAL PO WORKING GROUP		73020

WHITE PINE	B&S	49
	1 TO 20	0
	21 TO 40	0
	41 TO 60	0
	61 TO 80	85
	81 TO 100	234
	101 TO 120	9
	121+	381
TOTAL PW WORKING GROUP		758
BLACK SPRUCE	B&S	15013
	1 TO 20	4960
	21 TO 40	15485
	41 TO 60	17016
	61 TO 80	42674
	81 TO 100	31533
	101 TO 120	20238
	121+	13421
TOTAL SB WORKING GROUP		160340
SPRUCE ALL	B&S	14
	1 TO 20	0
	21 TO 40	431
	41 TO 60	1648
	61 TO 80	959
	81 TO 100	925
	101 TO 120	613
	121+	130
TOTAL SP WORKING GROUP		4720
WHITE SPRUCE	B&S	64
	1 TO 20	0
	21 TO 40	258
	41 TO 60	696
	61 TO 80	321
	81 TO 100	263
	101 TO 120	206
	121+	0
TOTAL SW WORKING GROUP		1808
TAMARACK	B&S	0
	1 TO 20	0
	21 TO 40	0
	41 TO 60	0
	61 TO 80	95
	81 TO 100	28
	101 TO 120	262
	121+	41
TOTAL TA WORKING GROUP		426
TOTAL WABIGOON FOREST		327758

NOTE: All depletions are removed from the appropriate age class and added to B&S in the same working group. Table has been updated to include all depletions from 1988/93 TMP period. Exclusions are not included.

2005 Independent Forest Audit

Table 6 - ANNUALIZED SUMMARY REPORT OF RENEWAL, TENDING AND PROTECTION OPERATIONS (RPFO-7)

MU: 130 Wabigoon Forest

	Area Summary of all Forest Units (ha)					
	1993-1998		1998-2003		2003-2008	
	Planned	Actual	Planned	Actual	Planned	Actual
Renewal						
Regeneration						
Uneven-Aged Management						
Selection Cut - Harvest						
Total Uneven-Aged Management						
Even-Aged Management						
Natural Regeneration						
Clearcut	270	292.2	1571	502.8	1458.8	1691
Strip Cut	159.6	0	210	0	23.6	0
Seed Tree Cut	39.4	13	130	9.4	164.6	0
Uniform Shelterwood Seed Cut	0	0	5	0	0	0
Subtotal Natural	469	305.2	1916	512.2	1647	1691
Artificial Regeneration						
Planting	906	1169.8	2760	2916.8	3433.2	3091.5
Seeding direct	2470	1296.6	1440	1057	1273.8	586
with site preparation	0	0	0	0	0	0
Scarification	51.6	14.6	400	9.6	30.4	54.5
Shelter Cones	0	41.2	0	0	0	0
Subtotal Artificial	3427.6	2522.2	4600	3983.4	4737.4	3732
Total Even-Aged Management	3896.6	2827.4	6516	4495.6	6384.4	5423
Total Regeneration	3896.6	2827.4	6516	4495.6	6384.4	5423
Site Preparation						
Mechanical	3312	2415.6	4370	3627.6	2922	3167
Chemical	0	0	300	94	116	0
Prescribed Burn	0	0	0	0	329.6	156.5
Total Site Preparation	3312	2415.6	4670	3721.6	3367.6	3323.5
Tending						
Cleaning						
manual	0	0	0	0	24	0
chemical - ground	0	0	200	121.2	45	20.1
- aerial	554	0	800	1198.4	1779.2	834.5
mechanical	0	0	0	0	28	0
prescribed burn	0	0	0	0	0	0
Spacing, pre-commercial thinning, improvement cutting						
even-aged	1510	0	1600	363.4	540.6	408
uneven-aged	0	0	0	0	0	0
Cultivation						
Total Tending	2064	0	2600	1683	2416.8	1262.6
Protection (Insect Pest Control)						
accelerated harvest						
salvage						
manual protection						
ground insecticide						
aerial insecticide						
Total Protection						

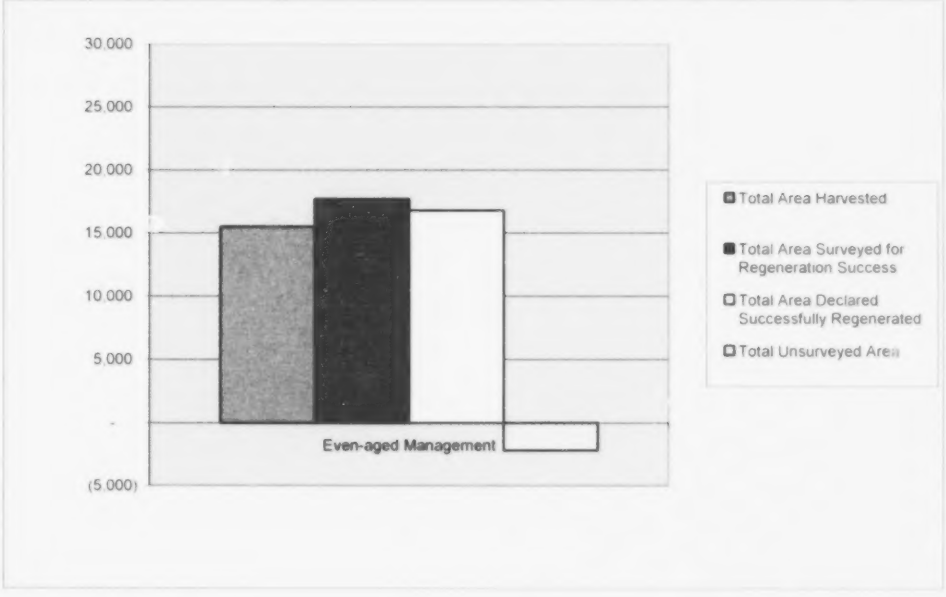
Source:
planned: TMPM Table 4.19, FMPM Table FMP-25
actual: TMPM Table 4.4, FMPM Table RPFO-7, annual reports

2005 Independent Forest Audit

Table 7 - Harvested Area Successfully Regenerated - Summary of All Forest Units

MU : Wabigoon Forest

	AREA IN HECTARES (All Forest Units Combined)
	Even-aged Management
Total Area Harvested	15,508
Total Area Surveyed for Regeneration Success	17,689
Total Unsurveyed Area	(2,181)
Total Area Declared Successfully Regenerated	16,779
Total Area Surveyed Not Successfully Regenerated	910
NSR	-
B&S	-
Not Available for Regen (eg. Roads & landings)	900
Other	-
Percent of Area Surveyed Declared Successfully Regenerated	94.9%



Source:
total area harvested: TMPM Table 4.1, FMPM Table RPFO-2, or annual reports
survey results: TMPM Table 4.7, FMPM Table RPFO-8, RPFO-9, 2004 FMPM AR-7, AR-14, AR-16 and silviculture records

Appendix B: Audit Team Members and Responsibilities

Name	Role	Responsibilities
John Cary, RPF	Lead Auditor	Overall audit coordination and oversight of activities of the audit team. Review of management objectives, contractual obligations, and forest sustainability.
Nick Baggs, RPF	Forest Management Planning Auditor	Review of Forest Management Planning requirements related to public participation including aboriginal participation.
Peter Street, RPF	Harvesting Operations Auditor	Review harvest planning, plan implementation and harvesting and compliance operations.
Laird Van Damme, RPF	Silviculture Operations Auditor	Review and inspect renewal and silvicultural practices and related documentation.
Peter Higgelke, RPF	Wildlife/ Ecology Auditor	Review and inspect AOC documentation and practices. Review and inspect aspects of forest management related to environmental and wildlife practices.
Colin Arlidge, RPF	Forest Modelling Auditor	Review the long-term SFMM strategic planning for the FMPs.
Ben Newman, RPF	Secretariat	Coordinate audit logistics and report preparation. Review public commitments and documentation control.

Appendix C: Independent Forest Audit Guiding Principles

1) Commitment
Commitment as reflected in vision, mission and policy statements of the company. Vision and mission statements are intended to provide long-term guidance for the organization. Policy statements reflect how the organization's vision and mission will be achieved. These statements must be reflected in the day-to-day operations of the organization.
2) Public Participation
The process of sustainable forest planning, implementation and monitoring is conducted in an open consultative fashion, with input from all members of the planning team, Local Citizens Committee, native groups, and other parties with an interest in the operations of the forest unit.
3) Forest Management Planning
The forest management planning process involves the input of a number of individuals and groups to describe the current condition of the forest, the values and benefits to be obtained from the forest, the desired condition of the forest in the future, and the best methods to achieve that goal. Certain minimum standards and procedures have been established upon which all management units are evaluated.
4) Plan Implementation
Verification of the actual results of operations in the field compared to the planned operations is required to be able to assess achievement of the plan objectives and compliance with laws and regulations. In conjunction with the review of operations, the reporting tables are tested to ensure accurate results are reported.
5) System Support
System support concerns resources and activities needed to support plan implementation so as to achieve the desired objectives. Appropriate control, documentation and reporting procedures must be in place and operational. Planned action should occur at planned times, in planned places and to the planned degree.
6) Monitoring
The activities and the effects of these activities in achieving management objectives must be regularly measured and assessed. In particular, the indicators of achievement must be assessed and their effectiveness reviewed.
7) Achievement of the Management Objectives and Forest Sustainability
Periodic assessments of the management of the forest unit operations and the forest unit must be made in order to determine whether forest sustainability and other management objectives are being achieved. This includes comparing the actual values of the predetermined indicators against the planned values and assessing the reasons for any significant deviations.
8) Contractual Compliance
The licensee must comply with the specific requirements of the SFL.

Appendix D: List of Acronyms

AHA	Available Harvest Area
AOC	Area of Concern
AR	Annual Report
AWS	Annual Work Schedule
BNV	Bounds of Natural Variation
CFSA	Crown Forest Sustainability Act
EA	Environmental Assessment
EBR	Environmental Bill of Rights
EMS	Environmental Management System
FFC	Forestry Futures Committee
FIM	Forest Information Manual
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FRI	Forest Resource Inventory
FTG	Free-to-Grow
FU	Forest Unit
HPA	High Priority Aspect
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
LCAC	Local Citizens Advisory Committee
MNR	Ministry of Natural Resources
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NDPEG	Natural Disturbance Pattern Emulation Guideline
OFIS	Ontario Forest Information System
OPSEU	Ontario Public Service Employees Union
RBT	Resource Based Tourism
RPF	Registered Professional Forester
RPFO	Report of Past Forest Operations
RSA	Resource Stewardship Agreement
SEV	Statement of Environmental Values
SFL	Sustainable Forest Licence
SFMM	Strategic Forest Management Model
SGR	Silviculture Ground Rule
Sh_ALL	Shallow all Forest Unit
SMA	Selected Management Alternative
SPF	Spruce-Pine-Fir
TPP	Timber Production Potential
WLON	Wabigoon Lake Ojibway Nation

Appendix E: Summary of Input to the Audit Process

General Public/Other Stakeholders
An advertisement was placed in four local newspapers (Dryden Observer, Ignace Dritwood, Sioux Lookout Bulletin and Wawatay News), providing notice of the audit and offering the public an opportunity to provide input to the audit team. The notice directed the public to contact the Dryden LCAC or the audit team with any comments regarding forest management activities on the forest management unit. Two comments were received as a result of the public advertisement.

As per the last minute request by MNR, the audit team made an increased effort and contacted in excess of 10% of the tourism operators on the Wabigoon Forest.

Public Survey
KBM prepared a one page public survey that was distributed to all identified organizations and a random sample of one-third of the individuals on the Dryden District mailing list provided by MNR (452 letters in total). In addition, the public notice was posted on and available for download from the KBM web site. The purpose of the survey was to solicit public input and to provide respondents with an opportunity to identify and discuss any site-specific concerns on the Forest. Twenty-one responses were received.

First Nations
Seven First Nations and two First Nations groups were directly notified of the audit. The notifications explained the purpose of the independent forest audit and invited participation and feedback from the communities. One response was received and it related to the forestry related economic opportunities.

Local Citizens Advisory Committee
A meeting between the Dryden LCAC and representatives of the audit team was held during the pre audit visit. During this meeting, the audit team introduced the process, invited the LCAC to participate, and gathered some initial comments on the management of the Wabigoon Forest and other forestry related topics. During the site visit, the audit team held interviews with current LCAC members to gather more input. One LCAC member attended a field day, and another attended the closing meeting. The meetings (combined with the review of related documentation and other interviews) enabled the audit team to evaluate the Committee's effectiveness. In addition, the audit team attempted to address each of the many specific (and some general) concerns that were raised.

SFL Holder
Weyerhaeuser staff provided an abundance of input into the audit. Methods included providing the Trend Analysis Report, maps and guiding field inspections. The audit team recognizes and appreciates that the staff made great efforts to assemble the field binders and organize many aspects of the audit. Numerous interviews were supported with extensive discussion in the field with Weyerhaeuser staff. These discussions formed a significant basis for understanding forest management of the Wabigoon Forest.

Ministry of Natural Resources
MNR staff provided significant input into the audit through interviews and preparation of documentation such as the FMPs, appendices, amendments, and record of public participation. Representatives from the Dryden district office were present at the pre-audit, opening and closing meetings, and were present for the field site visit. Interviews were conducted with the District Manager, Area Supervisor, Area Forester, Area Biologist, Senior Compliance Technician and others. MNR Regional and Corporate representatives also participated in the audit.

A list of some comments received includes:

Public
- Some individuals believe there will be a long term wood supply shortage

- One individual dislikes the cutting practices on private land that Weyerhaeuser buys wood from
- Some people would like to see bigger riparian reserves
- Many individuals question the spraying of herbicide (especially Garlon) on roadsides and near wetlands
- More than one negative comment received concerning the draining of Bear Narrows wetlands, and the Nabish wetland on the Barren Brook road
- One individual felt that clearcuts negatively alter hydrology and cause road washouts
- One person would like to see roads left in an impassible state after use
- One citizen was concerned over damage to registered snow machine trails
- One comment to support increased funding for environmental monitoring
- One letter commending the pine marten habitat being left
- One complaint over increased deer populations after clearcut harvesting

LCAC
- At least one member is concerned about the draining of wetlands near Nabish Lake
- The Committee is generally concerned that harvest levels are unsustainable
- They would like to see an inventory audit to increase their confidence in timber supply projections
- One comment received regarding the perception of a fragmented landscape
- Some members dislike herbicide use on roadside vegetation, especially without first being informed through the planning team
- One concern received regarding disappearing old growth
- One member would like to see more live poplar left in cutovers
- Many on the Committee are concerned or would like more information on forest unit conversion; one member especially concerned in the Bear Narrows, Tower Road areas
- One member feels there is insufficient white and black spruce and red and white pine regeneration
- One comment asking for better long term road planning to protect wilderness and remote tourism
- At a meeting with the LCAC, members of the audit team received other input on the effectiveness of the Committee

Stakeholder Groups
- One organization is happy to see quantified targets for road accessed recreation areas
- One operator feels access to remote tourism areas should be restricted
- One business encouraged the maintenance of access to mining claims
- One group is worried about the abundance of younger age class forests
- One stakeholder organization is concerned about forest cover type conversion and the results in FMP-29
- One group felt the FMP summary didn't list the guides well enough or at all
- An organization questioned the absence of woodland caribou from forest diversity discussion, and the sustainability of its habitat
- One letter states the moose guidelines and NDPEG are in conflict
- One group found mathematical errors in FMP-19
- An individual businessman was pleased with an amendment to address his concerns
- Two groups were concern that there was insufficient financial and human resources provided by MNR and the licensee to manage the Forest
- One business stated there are too many clearcuts that negatively impact the aesthetics for tourism operators

Adjacent Licensees/Operators
- An adjacent licensee is concerned about the shift in the MU boundary after the NAD83 conversion
- **Late Submission.** Ainsworth Engineered Canada LP, operators of an OSB facility in Barwick, near Fort Frances, submitted a letter to the audit team on December 14, 2005, drawing attention to the failure of their efforts in attempting to execute an MOA to address a wood supply commitment with Weyerhaeuser.

Tourism Operators (phone interviews)
- Six operators provided very detailed input
- One respondent had no specific comments

- Three businesses planned to reply at a later date but never did
- The remaining four never replied
- Road access to remote operating areas, impacts to the viewscape, and effective communication were the main topics of discontent
- Many respondents are aware of the RSA initiative and welcome it's implementation if it will provide benefit to them

Overall, 11 other comments were vague or generally supportive. There were five other replies to inform the audit team that the identified person or group had no interest in the Forest, the recipient's name or address had changed, or the individual was now deceased.

Appendix F: Public Survey

KBM FORESTRY CONSULTANTS INC.
2005 INDEPENDENT FOREST AUDIT
PUBLIC SURVEY

Every five years, as part of the Province's responsibility for resource management in Ontario, the Ministry of Natural Resources (MNR) contracts firms to evaluate forest management activities on Crown lands. KBM Forestry Consultants Inc. of Thunder Bay, Ontario has been engaged by the MNR this year to conduct an independent forest audit of the Wabigoon Forest for the period 2000-2005.

As part of our evaluation, we would appreciate your input as a member of the public with an interest in forest management on the Wabigoon Forest. If you have comments related to forestry activities during the five-year period April 1, 2000 to March 31, 2005, please complete and submit this form (please see back of sheet for more information on the audit process).

KBM provides this opportunity to comment on the Wabigoon Forest audit under the authority of Ontario Regulation 160/04, made under the Crown Forest Sustainability Act, 1994. Any personal information will be used solely by the audit team as input to the Wabigoon Forest Independent Forest Audit. Any questions regarding the collection, use, and retention of the personal information can be directed to John Cary, Lead Auditor at 416-255-0385 (e-mail: jcary@sympatico.ca) or to the KBM address indicated below.

Name: Tel. and/or email:

1. What is your interest in forest management on the Wabigoon Forest?

Recreation ☐
Employment (forestry, tourism) ☐
Conservation ☐
Other:

2. Can you identify any specific locations or activities on the Wabigoon Forest that illustrate good OR poor management practices, and that the audit team should be aware of in conducting their evaluation? (*Please indicate if we may contact you for more information.*) (☐**Yes** ☐**No**)

3. Have you ever contacted forest managers with comments or concerns during the 2000-2005 audit period? (*e.g., local Ministry of Natural Resources, Weyerhaeuser Company Limited*) (☐**Yes** ☐**No**)

4. If yes, were you satisfied with the response? (☐**Yes** ☐**No**)

5. Feel free to add any additional comments (use additional sheet if required)

Please **mail, email, or fax** the completed survey (Attention: Ben Newman) to the address/fax number below by **Friday, September 2, 2005**.

The survey can also be accessed through our website, located at www.kbm.on.ca

Although we cannot respond to everyone, we do take into consideration all comments received and thank you in advance for your input!

KBM Forestry Consultants Inc.
bnewman@kbm.on.ca
349 Mooney Avenue
Thunder Bay, ON P7B 5L5
http://www.kbm.on.ca
Tel: (807) 345-5445
Fax: (807) 345-5858

INDEPENDENT FOREST AUDIT

Wabigoon Forest

KBM Forestry Consultants Inc. has been retained by the Ministry of Natural Resources (MNR) to conduct an Independent Forest Audit, consistent with the Crown Forestry Sustainability Act, on the management of the Wabigoon Forest.

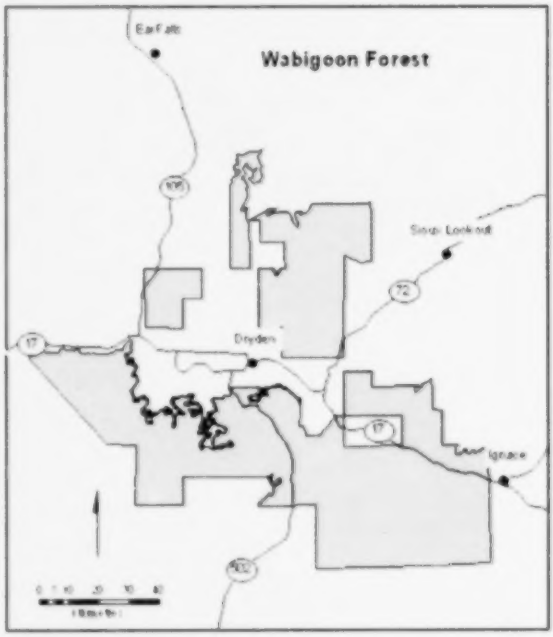
The audit covers the April 1, 2000 to March 31, 2005 operating period. You are invited to comment on the forest management activities on the Wabigoon Forest for this period of time. Please mail, email, or fax this form to:

Ben Newman
KBM Forestry Consultants Inc.
349 Mooney Avenue, Thunder Bay, ON
P7B 5L5
bnewman@kbm.on.ca
Tel: (807) 345-5445 ext. 250
Fax: (807) 345-5858
Toll-Free: 1-800-465-3001
(All correspondence sent to KBM is confidential)

Alternatively, comments can be made directly to the Local Citizens Committee Chairperson:

Mr. Peter Brunner, Chairperson
Box 7 Dinorwic, ON, P0V 1P0
pbrunner@moosenet.net
(The privacy of any information given to the LCC may not necessarily be protected)

Comments received until September 2, 2005.



Purpose of the Independent Forest Audit

The Purpose of the audit is to assess:

- compliance with the *Crown Forest Sustainability Act*,
- compliance with the Forest Management Planning Process,
- a comparison of planned versus actual forest management activities,
- the effectiveness of forest management activities in achieving audit criteria and management objectives, and
- where applicable, a licensee's compliance with the terms and conditions of the Sustainable Forest Licence.

The seven-member audit team will evaluate forest management planning and practices such as harvest operations, forest renewal activities, road construction and maintenance as well as opportunities for public input and First Nations consultation. The main objectives of the audit are to assess compliance with provincial laws and regulations as well as comment on the effectiveness and sustainability of forestry activities on the management unit.

In addition, the independent forest audit provides an opportunity to improve Crown land management in Ontario through adaptive management. The audits are conducted by consultants that are independent of the Ministry of Natural Resources and the companies being audited, and firms are selected in an arms-length process by the Forestry Futures Committee of Ontario.

Appendix G: Public Notification

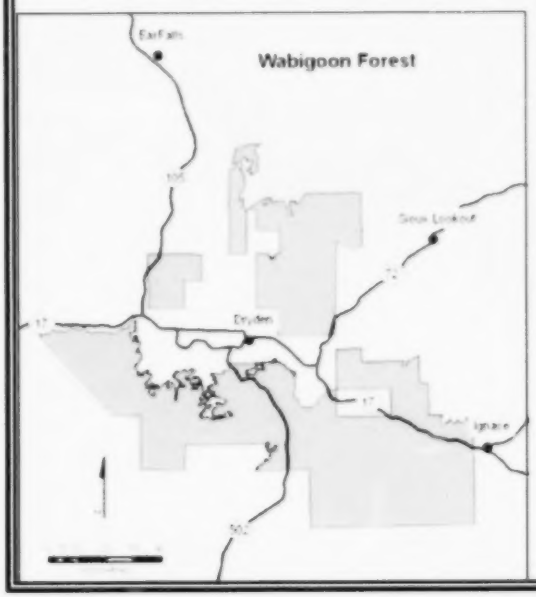
WABIGOON FOREST
INDEPENDENT FOREST AUDIT

KBM Forestry Consultants Inc. of Thunder Bay, Ontario has been retained by the Ontario Ministry of Natural Resources to conduct an Independent Forest Audit, consistent with the Crown Forest Sustainability Act, on the management of the Wabigoon Forest.

The purpose of the audit is to assess forest management activities within the Wabigoon Forest during the five year audit period from April 1, 2000 to March 31, 2005. Specifically:

- **compliance with the Crown Forest Sustainability Act;**
- **compliance with the Forest Management Planning process;**
- **a comparison of planned versus actual forest management acitivities;**
- **the effectiveness of forest management activities;**
- **the effectiveness of previous audit action plans; and**
- **compliance with the terms and conditions of the Sustainable Forest Licence.**

You are invited to comment of forest operations on the Wabigoon Forest for this period of time. Please provide you comments by Friday, September 2, 2005, directly to the Dryden Local Citizens Advisory Committee:



Mr. Peter Brunner, Chairperson
pbrunner@mosenet.net

(The privacy of information given to the LCC may not necessarily be protected).

Alternatively, comments can be sent directly to the audit team at:

Ben Newman
KBM Forestry Consultants Inc.
349 Mooney Avenue
Thunder Bay, Ontario P7B 5L5
p: 807-345-5445 x.250
f: 807-345-5858
toll free: 1-800-465-3001
bnewman@kbm.on.ca
(All correspondence sent to KBM is strictly confidential.)

For more information or to download our public audit survey, please visit: www.kbm.on.ca.